ABSTRACT

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THE IMPACT OF THE FREQUENCY OF TECHNOLOGY USE ON CLIENT ENGAGEMENT BEHAVIORS EXHIBITED BY CHILD WELFARE WORKERS

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This study examines the relationship between the frequency of technology use and the tendency of child welfare workers to exhibit engagement behaviors with their clients. This study was based on the premise that increased technology use is negatively associated with the quality of direct human interactions. The design of this study is descriptive and quantitative in nature. To identify and describe the potential relationships between demographic, technology use, and engagement variables, numerical data were collected through an anonymous 46-item survey. A multiple regression analysis approach was used to analyze the data gathered in this study. The researcher found that the frequency of technology use has no significant relationship with how participants perceive themselves as engaging their clients. An unexpected finding yielded by this study is that the child welfare workers under study utilize technology so frequently that it

becomes apparent they have little time left to have direct client contact and consequently limited opportunities to engage clients. Taken together, these findings suggest that while technology use has no significant relationship with workers' tendency to exhibit engagement behaviors during client interactions, it may be negatively associated with the frequency of opportunities workers have to exhibit those behaviors.

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CHAPTER I

INTRODUCTION

According to the Adoption and Foster Care Analysis and Reporting System (AFCARS), 255,418 children entered foster care in fiscal year 2009. As of September 30, 2009 there were approximately 423,773 children in foster care (Child Welfare Information Gateway, 2011). Several studies have been done on job satisfaction among child welfare workers and key findings often identify high caseloads as a primary source of worker burnout (Lizano & Barak, 2012; Mor Barak, Nissly, & Leven, 2001; U.S. Government Accountability Office, 2006).

During a discussion on September 13, 2011 about the current state of Georgia's Department of Family and Children Services (DFCS) workforce, one county administrator shared that her county was experiencing 8 of 18 vacancies in both Child Protective and Foster Care service units within her DFCS office. It was shared that due to staffing challenges, DFCS staff had been on furlough for 3 years and several of Georgia's smaller DFCS offices had been forced to close their office doors 1-2 days a week in an effort to get required documentation completed. Given the magnitude of families and children serviced by DFCS offices and an insufficient supply of workers and resources to meet service demands, child welfare service administrators had been forced to pay special attention to what support resources they may have been able to provide

workers, most of whom struggled to keep up with their workloads (Whitaker, Torrico Meruvia, & Jones, 2010). There has been an increase in investments dedicated to technology as a solution to workload challenges (Bissell, & Miller, 2007; Pechover, Hall, & White, 2009; & Hudson, 2002)

The integration of technology into child welfare programs is continuing to grow as evidenced by computerized notebooks being utilized during home visitations and assessment programs being used as aids in making case decisions (Whitaker, Torrico Meruvia, & Jones, 2010; Bissell, & Miller, 2007). The merging of technology and child welfare practice seems fitting and appropriate given the increased use of technology across all generations and cultures. There is an assumption, however, that the benefits of technological advances outweigh the consequences (Anderson & Rainie, 2010).

Our society cannot afford to operate on assumptions when it comes to caring for our youth. Some researchers have challenged the assumption that technology has resulted in overwhelming benefits to all and have consequently revealed serious findings that must be taken into consideration in the child welfare field. Of critical concern revealed by such studies are the social consequences that are paid as a result of increased technology use (Turel, Serenko, & Bontis, 2011; Markus, 1994). There is a growing body of research that suggests the use of technology takes away from the time people spend engaging in social interactions (Nie & Erbring, 2002). Furthermore, it has been found that the implementation of technological resources in the child welfare system, and the required use thereof, has resulted in workers having less time to spend with their clients (Edwards & Reid, 1989). Taking into consideration the expanded use of technology, both personally and professionally, one must consider whether engagement is

lessened. This is of particular importance in the field of child welfare where engagement is considered a critical element of practice (Altman, 2008; Kemp et al., 2009).

Statement of the Problem

There has been a growth in demands placed on today's child welfare worker. The needs of children and families have grown increasingly complex and are accompanied by a decrease in the availability of resources needed to support them. As a consequence, children under the supervision of child welfare agencies linger in foster care systems and are often left in life-threatening situations. The context within which child welfare workers provide protective services has also changed dramatically largely as a result of an increased use of and dependency on advanced technology (Smith & Donovan, 2003; Weaver et al., 2003; Altman, 2008). Technological resources are turned to as a means of improving child welfare worker effectiveness and efficiency, however the effects of the mandated use of such resources go understudied (Bissell, & Miller, 2007; Pechover, Hall, & White, 2009; & Hudson, 2002).

Advanced technology and the use thereof has blurred personal and professional realms, which has resulted in Americans becoming increasingly dependent on technology at home and in the workplace. Increased dependency on technology is proposed to have significant, yet understudied, personal and professional implications (Duxbury & Smart, 2011). Research on the daily behaviors of today's child welfare worker, the technologically-driven landscape within which child protective services are provided and the impact of technology on Social Work practice is limited. The lack of sufficient research in these areas may have significant irreversible effects on those served by child welfare agencies (Smith & Donovan, 2003; Humphries & Camilleri, 2002).

Purpose of the Study

In general, the purpose of this study was to research trends in personal and professional technology use among child welfare workers and the level of alignment between workers' self-reported-practice behaviors and established good-practice behaviors. More specifically, this study was designed to determine the relationship between the frequency of technology use and child welfare workers' tendency to engage their clients. This study addressed unfounded assumptions about technology, which suggest that advancements in technology have enhanced our ability to communicate with others. This study aids in the development of an understanding of whether technological advances are helping or hindering child welfare workers in the development of effective worker-client engagement. This study also aids in the development of an understanding of the relationship between technology and social work practice. It is clear that technology offers a number of opportunities in child welfare practice on multiple levels; however the challenges that accompany those opportunities are less understood.

This study fused concepts of technology use and client engagement behaviors, which are concepts heavily studied independently of one another, however unstudied in relationship with one another. This study helps identify practical implications of increased technology use. Identification of the realities of daily child welfare worker practice helps child welfare educators, administrators, and policy makers to support child welfare workers in their goals of attaining safety and permanency for the children and families they serve. Such knowledge improves the effectiveness of child welfare agencies as it serves as a resource to support evidence-based practice. In effect, this study has the potential to improve the efficiency of child welfare agencies as it helps

clarify whether spending billions of dollars for new technological software brings agencies closer to their ultimate goals or whether such resources would be better served in other dimensions of practice. The ultimate benefactors of this research are those served by child welfare agencies, given the service improvements that would likely result from consideration of this research.

Research Question

Is there a relationship between the frequency of technology use and child welfare workers' tendency to exhibit engagement behaviors with their clients?

Hypotheses

The null hypothesis for this study is: There is no statistically significant relationship between the frequency of technology use and the tendency of child welfare workers to exhibit engagement behaviors with their clients.

The current researchers' hypothesis was: The more frequently technology is used by child welfare workers, the less likely workers will be to exhibit engagement behaviors with their clients.

Significance of the Study

Ultimately, this study assists in developing an informed perspective on whether increased technology use has helped or hindered child welfare workers in the protection of youth. The Preamble to the Social Work Code of Ethics reminds us that a historic and defining feature of the Social Work profession is its emphasis on individual and societal well-being within social context. To be effective in these changing times, Social Workers must follow the work ethics of doing the right work the right way and working smarter not harder. If there are better ways to do our work, we owe it to our clients and

communities to adjust accordingly. This study assesses whether child welfare professionals are practicing in the spirit of the Code of Ethics.

The child welfare system has been in a state of crisis regarding the limited staffing and resultant services it has been able to provide youth and their families. The child welfare system has an ethical obligation to address this crisis, making it an absolute necessity to assess the policies that guide current child welfare practice and ensure such practices are in synchronization with empirical evidence over assumptions. The outcomes provide child welfare policy makers and educators research to aid in the development of evidence-based practice. There is a call for Social Work to be guided by a professional model with an ethos of updating and continuing professional development (Cooper, 2000).

Technological growth and development has thrust Social Workers into personal and professional environments of constant change. To best adapt to such change, assessment measures must also be constant. Social change requires us to evolve, be open to new possibilities, and stay current and knowledgeable about how best to approach change efforts while embracing the building blocks of our profession. Jane Addams proposed many years ago that social advance depends as much upon its developmental process as its results (Johnson Lewis, 2012).

This study aids in the development of a better understanding of whether the technology-driven environments child welfare services are provided in still hold good-practice behaviors, such as client-engagement, a priority. More specifically, this study offers insight regarding whether child welfare workers are better able to engage clients as defined by best practices and clients who attribute child safety enhancements and risk

reduction to the engagement behaviors demonstrated by their case managers. Successful client engagement has been recognized as a salient theme across cases with positive outcomes; hence it is critical that we look at ways to enhance worker-client engagement and shun threats to it. Failure to engage in such research may prove understatedly life altering and have negative consequences to family safety, stability and development (Altman, 2008; Kemp et al., 2009).

In essence, this study contributes to an assessment of how the increased use of technology, in general, and in child welfare practice specifically has impacted child welfare workers – for better or worse. This study also offers child welfare administrators insight on the propriety of spending millions of dollars more on additional technological resources in support of child welfare workers. Finally, this study is significant in its ability to fill critical gaps in the literature, to include insight from the workers' perspective about their daily behaviors and the realities of their relationships with clients, the technology-driven context within which child welfare workers provide service, and the relationship between the frequency of technology use and social work practice (Smith & Donovan, 2003; Humphries & Camilleri, 2002).

CHAPTER II

REVIEW OF LITERATURE

This chapter is intended to highlight the findings of a review of the current literature as they relate to the major elements of the study. This review provides a background for the current study, which better contextualizes its significance, purpose, and design. It is initiated by discussion of the study's principal concepts of "technology use" and "engagement" independent of one another, followed by discussion of how the natural fusing of these concepts has likely impacted Social Work practice. The state of the child welfare worker is also addressed, to include how workers are increasingly being expected to utilize technology as a means to carry out their work and the impact of such requirements. The literature review is concluded by an evaluation of the theoretical framework used to provide a sense of direction for this study.

Technology Use

Technology is an extremely broad term, which can be used to describe almost anything. Cotten's conceptualization of the phrase "technological use" was used for this study. The phrase refers to the utilization of technology for the purposes of information and communication exchange. While information and communication types of technology can be further specified, the aforementioned conceptualization is broad yet specific enough to describe the types of technological medium under study. Information and communication types of technology include a variety of communication devices,

such as radio, television, cellular phones, computers, computer and network hardware and software, and a variety of applications for these technological mediums, such as gaming, social networking, instant messaging, and texting (Cotten, 2008).

Since the late 1990's, the internet is said to have prompted a new and powerful social institution (Goldsmith, 2000). This new heavily relied upon institution has resulted in an increase in the blurring of the lines between professions and expertise (Cotten, 2008). Phillip Molebash conducted an analysis of technology and education for the purposes of analyzing the trends in technology and their relationship to education. He utilized his analysis to make predictions about the future of technology and education. Molebash emphasizes the criticality of analyzing technological trends when determining the future of education. Technological advances have resulted in globalization, which has necessarily forever changed society. In response to these changes, educators must change with the times, in spite of any reservations they may hold about doing so (Molebash, 2004).

Trends. Years ago, sharp distinctions existed between computers, photos, publishing, TV/Video, and telecommunications. Today, the distinctions between these types of media have become blurred. This blurring of technological device capabilities is referred to as "technological fusion." The fusion has led to the development of singular devices prepared to perform all the functions of yesterday's separate devices (McCain & Jukes, 2001).

Gumport and Chun share how the development of their article on Technology and Higher Education exemplifies the impact that technology has on collaboration and production. In addition to increasing access to the information they used, technology

enabled them to communicate with one another via phone, voicemail and email while each engaged in separate travels. In essence, they point out that technology heavily influenced their process as well as their final product (Gumport & Chun, 2005).

Technological advancement has dramatically changed the social organization of teaching and learning. It has prompted the virtual learning aspect of education. A major push for virtual learning has been the needs of adult learners. Employers also benefit from such a learning resource. They are in need of workers who are constantly updating their knowledge and skills to adapt to the rapidly changing landscape within which they work given the rapid pace of technological growth and development (Gumport & Chun, 2005).

Technological applications have made it possible for students to advance their studies and obtain educational degrees via online learning. Professors are able to lecture via interactive video and teach students in multiple locations simultaneously. These online capabilities also allow students an opportunity to access their daily learning via prerecorded lessons and to do so at times convenient to the student. Computers allow easier revisions, easier collaboration, and new forms of knowledge dissemination (Gumport & Chun, 2005).

In an effort to improve medication adherence, the Burbank, California-based Front Porch Center for Technology and Wellbeing initiated a program called Minding Our Meds. A major focus of this support program is to remind older adults to take their medications via cell phone texting. The text messages remind adults to take their medications at the right times and also reminds them of the proper prescription dosages. The text communications may also be set up to be delivered to the caregivers in instances

where the program member fails to comply with the text notification. The program founders believed cell phone mobility combined with the convenience of the cell phone texting feature would better educate adults than would the traditional printed educational materials. Of added benefit provided by text reminders is that it would utilize a communication that statistics say many older adults already have and use to increase their ability to remain independent and active (Reardon, 2012).

Nonprofits and advocacy organizations around the world are utilizing cellular devices in support of client advocacy, constituent communication, and service provision. For example, in California, law enforcement officers are documented as using mobile phones to communicate with victims of domestic violence. Officers called to homes of domestic violence victims who do not speak English, have the option of passing the phone back and forth utilizing a call-in-service resource called The Language Line. The line offers translation services in 170 languages (Ramey, 2008).

In this way, technology is being embraced as at least one strategy for addressing commonly experienced issues associated with language barriers. As a pointed example of collaborative efforts in developing creative solutions in response to increasingly complex problems, the aforementioned law enforcement officers are using phones donated by AT&T to call into The Language Line. In areas, like San Francisco, that are heavily populated with immigrants and where over 100 different languages are spoken, such translation services have proven to be practical and potentially life-saving devices (Ramey, 2008).

Thomas Frey is Google's top-rated future speaker and the executive director of The DaVinci Institute, in an article on the 28 Major Trends for 2012 and Beyond, Frey

makes several predictions related to technological trends. The gamification of business is listed as one of his predicted trends. Gamification is defined as applying game techniques such as leveling, rewards, and competition to the human experience. Frey predicts that gamification will become more mainstream than its current techie circle popularity (Frey, 2012).

Gamification is already becoming more common in daily business processes, driving adoption, performance, and engagement. The Nike campaign, for example, sought to gamify the process of personal training. People visit an online training site and enter details of their running times and routes to compete for prizes with others around the world. As another example, many restaurants are offering free deserts to those who talk about their restaurant experience on particular online sites. The goal is to add fun to daily living (Frey, 2012).

Frey also predicts society as experiencing a stronger movement toward Going Cashless. Google Wallet, a free mobile system became available to select retailers across the U.S. in October 2011. Shoppers are now able to tap their mobile device on a special terminal at points-of-sale to pay instantly. A similar such application was introduced by PayPal for Android users in June 2011. An electronic payment service that enables users to accept credit card payments by using a portable credit-card reader device that plugs into various cellular devices has also become available (Frey, 2012).

Driverless Cars and Autonomous Vehicles also lie among Frey's predictions. He predicts that self-driving cars and the adoption of such technology will change everything in the field of transportation planning. Self-driving cars are argued to be closer to a reality than many realize. Google's self-driving car project has already resulted in

200,000 driverless miles on highways. Many car companies to include General Motors, Volkswagen, Audi, BMW, and Volvo are in the early stages of testing driverless car systems. These cars are predicted to be safer than those driven by humans. It is also predicted that with fewer car accidents, there will come a decrease in the number of traffic officers, traffic courts, stoplights, and parking lots (Frey, 2012).

Frey predicts rapid growth of the Going Waitless movement, where consumers of services that traditionally required long waits in line, like with the Department of motor vehicles, will have their wait times dramatically reduced. Consumers will receive a text message when it is their turn for service, thereby allowing consumers to go grocery shopping, while waiting in a virtual line. Technological advancements are also said to be prompting The Self-Health Movement. Self-diagnostic tools, self-monitoring devices and self-analysis systems are now available and are predicted to grow in popularity. Apple now provides 9,000 mobile health applications, 1,500 cardio fitness applications, more than 1,300 diet applications, over 1,000 stress and relaxation applications, and over 650 women's health applications. In October 2011, AT&T announced that it will be selling clothes that contain health monitors that will track the wearer's vital signs, heart rate, and body temperature and upload this data to a website (Frey, 2012).

Over the past two decades, technology use has become so engrained in daily life that the range of its functions tends to go overlooked. In many homes, phones, cable televisions, and personal computers have become the norm. In the workplace, computerized work stations and access to the internet for communication are fairly standard. The personal computer seems to be the most common form of advanced technology used by Americans. On a daily basis, Americans log on, re-boot, input, copy,

paste, spell check, scroll, email, download, search, print, escape, and quit several times a day. Computer applications are used for word processing, emailing, accessing the internet for news, accessing travel and library collections, banking, shopping, and filing tax returns. These technological service functions are typically perceived as ways to make life easier (Gumport & Chun, 2005). Use of the internet is expanding with the speed of a virus. Its capacity to carry information doubles every 100 days. The content of the Worldwide Web increases by 3.2 million new pages and 715,000 images every 24 hours (The UCLA Internet Report, 2000).

Additional trends in technology use are exemplified by the following statistics:

- Seventy-three percent of adult Americans are internet users and an average of about 70 million adults use the internet on any given day (Pew Research Center, 2006).
- Fifty-five percent of the population has access to the internet (Nie & Erbring, 2002).
- Seventy-seven percent of internet users, use it for information gathering purposes (Nie & Erbring, 2002)
- A third of internet users report making online purchases and under 15% report engaging in other online transactional activities (Nie & Erbring, 2002).
- Sixty-eight percent of Americans own a desktop computer, 10% have a laptop computer, and 73% live in a home with an internet connection (Cotten, 2008).
- Forty-two percent of Americans use e-mail every day (The UCLA Internet Report, 2000).

- Email is the most common form of internet activity. 90% of all internet users email (The UCLA Internet Report, 2000).
- There are 236 million cell phone users in the U.S., with an astounding 76% penetration rate (Ramey, 2008).
- Over 60% of Americans own a cell phone. As of 2005, cell phones represented about 43% of all U.S. phones in service (Totten, Lipscomb, Cook, & Lesch, 2005).
- Fifty-eight percent of Americans between the ages of 50-64 and 24% of adults over the age of 65 use the texting feature of their cell phone to send or receive messages (Reardon, 2012).
- Seventy-eight percent of smartphone users over age 50 use their phones for text messaging (Reardon, 2012).
- In December of 2007 alone, 18.7 billion text messages were sent. That equates to an increase of 92% from 9.7 billion in December 2005. Estimates are being made of over 195 billion text messages sent in 2007, which is the equivalent of 600 million text messages a day (Ramey, 2008).

In a large-scale study of 103 college institutions and 27,846 respondents, college students reported spending an average of 18 hours a week on internet-related activities, and 7% of those students reported spending more than 40 hours per week online. Over 98% of the survey respondents reported owning a computer. Nearly 100% reported using email, 84% reported using instant messaging, and nearly 80% reported social networking daily (Salaway, Caruso, & Nelson, 2007). In another study, approximately 65% of the 168 study participants spent over 3 hours per day online, 62% emailed weekly, & 67%

used Instant Messaging daily (Quan-Haase, 2007). In a sample of 287 first year college students, it was found that students spent an average of 3.9 hours emailing, 16.3 hours chatting and instant messaging, and almost 12 hours in non-communication internet based activities per week (Morgan & Cotten, 2003). In a convenience sample of undergraduate students, it was found that the top 5 internet uses were emailing friends, getting schoolwork assistance, communicating with friends, emailing family, and instant messaging (Gordon, Juang, & Syed, 2007).

Opportunities and challenges. Approximately two-thirds of internet users and about half of non-users believe that new communication technologies (to include the internet) have made the world a better place (The UCLA Internet Report, 2000). Gumport and Chun caution that while technological advances have enhanced communication environments, learning infrastructures, and information infrastructures, these opportunities should not be embraced without caution. The adoption of such technology is not automatic and may result in unforeseen consequences (Gumport & Chun, 2005).

It is argued that the information age prompted by dramatic technological growth and development has changed communication, the workplace, science, entertainment, and education. The nature and scope of these changes are still debated. For example some see technology as the cure for all of education's woes, whereas others are more skeptical expressing that technology cannot be seen as a cure-all rather it should be perceived merely as a collection of tools. Skeptics argue that the successful use of such tools for positive change will require a paradigm shift for all involved in processes of teaching and learning (Gumport & Chun, 2005).

The field of education is argued to be running behind other professions in adapting to the changes prompted by technological growth. Classrooms of today are argued to look strikingly similar to the classrooms of 50-100 years ago. It is said that a teacher of today would have little difficulty stepping into a classroom of 100 years ago, whereas today's physicians would be lost in an operating room of 100 years ago (Fulton, 1989). In spite of a widely accepted assumption that change is inevitable, education has failed to prepare for the change. Educators are slow to adjust curriculum to better prepare students for the workforces within which they will find themselves (Gentre & Csete, 1990).

To properly prepare students to be contributing members of society, we must consider the nature of the economy they are entering. As a result of the technology-driven nature of our society, we must consider the fact that employers are looking for students who are computer fluent, not just literate. Many jobs requiring information technology skills go unfilled, likely because the educational system has failed to adequately prepare students for work in the current economy (Molebash, 2004).

Educators are charged with reshaping literacy instruction to properly prepare the current generation of students, often referred to as the Millennium Generation. The students of today are described as Digital Natives as they are the first generation to grow up in a world immersed in the use of advanced technology. They are fluent in various modes of technology, while their teachers, referred to as Digital Immigrants, struggle to keep up with the changes prompted by rapid technological growth. Teachers of digital immigrant status speak with an accent and come from very basic models of learning. While they are interested in creating a literacy environment that supports their students'

ways of learning and knowing, they fall short in the efficient use of their classrooms (Carroll, 2011).

While some modes of advanced technology have been wholeheartedly embraced as valuable to the field of education, others have not been so strongly received (Gumport & Chun, 2005). The impact of technology will be difficult to assess until its use has grown among users. The introduction of the telephone provides such an example. The impact of the telephone could not be assessed until there was a critical mass of users (Fiske & Fischer, 1988). When technology radically challenges long-held assumptions, it is likely to be met with resistance. On the other hand, when technology fits one's current paradigm, then its adoption will likely be less controversial (Gumport & Chun, 2005).

A paradigm paralysis framework may be used to explain why educators have been slow to change in response to the growth and development of technology. An application of the paradigm paralysis framework indicates that people are slow to understand and use technological advances as a result of their previous experiences. In order to change paradigms, people must have new experiences to replace the old, which calls for a time investment. Unfortunately, technological growth is occurring faster than education has been able to prepare for it (McCain & Jukes, 2001).

The lag in the adoption of technology can also be attributed to the fact that to fully embrace it is time-consuming. General course preparation is time-consuming in itself and adding the inclusion of technology would increase course preparation time. Such time investments by way of promotion and tenure review have not yet been as rewarded as scholarly publications. So there is little imputes for change. In some cases, the lag

between the introduction of new technology and its acceptance can last for centuries (Gumport & Chun, 2005).

Willis and Mehlinger also point out a challenge experienced by educators that has resulted in the field of education's failure to adapt to technological growth. They posit that there is great debate about how technology should be used in the field of education. Since Willis and Mehlinger's work, we have seen great debate across educational programs about which courses should be taught online and whether online teaching should be incorporated at all (Willis & Mehlinger, 1996).

There is a need for proper pre- and in-service training for educators. Teachers must be clear on the many benefits that technological advances afford the field of education, they must be also be clear on which aspects of the field are appropriate for technological inclusion. Educators must be trained on how to properly apply technology in their field to avoid a lengthy learning curve (Molebash, 2004).

Seymore Papert was cited as having argued in 1984 that no one truly has a vote on whether technology will have an impact on lives. He was right, the focus has now moved from whether we should allow technology to affect us to how we can utilize technological advances to our benefit. If gamification is our destiny, then educators and social scientists have an obligation to consider how the new skills and strategies gained by students can be used to maximize their preparation for future success (Carroll, 2011).

Similar to the experiences of other institutions, colleges and universities are being pressured to "do more with less" which serves as a catalyst for reconsidering previously held reservations about the infusion of technology into the field of education. The hope is that technology will result in more affordable, accessible, and effective teaching and

learning. Of benefit to students and parents, information about colleges and universities may be obtained online. Course registration is now typically done online doing away with the need to wait in long lines in gymnasiums (Gumport & Chun, 2005). A vivid example of increased production promoted by technological development is found in review of the field of postal service. The U.S. Postal service is documented as having delivered 185 billion pieces of first class mail in 1996, while in that same year the internet handled an approximated one trillion email messages (Molebash, 2004).

Eighteen scientists, entrepreneurs and thinkers were selected by the United States National Academy of Engineering (NAE) to highlight problems for technology in the twenty-first century that if solved would forever change the world. The team identified the provision of clean energy as a priority. They proposed that they would only need one part in 10,000 of the sunlight that hits the earth to meet 100% of the world's energy needs. They further proposed that they would be able to capture what they need with the availability of nanoengineered solar panels and nanoengineered fuel cells to store such energy in a decentralized manner (Jha, 2008).

The team suggested small-scale technologies for local water purification to meet the personal needs of water consumers. They proposed genetic technology as a means to allow doctors to forecast the benefits and side effects of potential treatments or cures. The team also identified the development of advanced computer intelligence that would enable automated diagnosis and prescriptions for treatment (Jha, 2008).

A vivid image is presented in the literature of how the field of education holds examples of the increased production prompted by technological growth and development. In one classroom, Gumport and Chun note, students are working on

problem sets and incorporate their notes into the original classroom material for future access in technological devices called SoftBooks. A student is undergoing a doctoral oral exam and two off-campus faculty examiners are in attendance, one in Boston and the other in London (Gumport & Chun, 2005).

In description of another learning activity, students are collaborating on an educational assignment through email, desktop video conferencing – to include a shared workspace and overnight package delivery services. On the other side of campus at the main library, a student logs in to check her grades, while another does a search through biology journals on the World Wide Web. In another instance, an Anthropology professor displays a CD-ROM he prepared that shares a virtual reality walk through of an archaeological excavation site. Many are unfamiliar with the full range of opportunities that technology offers the field of education and it is important to note that on a larger scale even fewer are able to afford them (Gumport & Chun, 2005).

Technology has often been considered a means for improving efficiency. The potential for educational technology to reduce institutional costs by replacing faculty becomes an attractive option. However, the cost of hiring new personnel to support and maintain the use of technology and retrain and upgrade the skills of existing personnel might result in a balance of the required investment costs and the sought after cost savings (Gumport & Chun, 2005).

While technology allowed for increased communication in spite of their busy schedules and business trips, Gumport and Chun share that there were also times when technology posed challenges for them. For example, they experienced problems converting files between computers, were challenged by inabilities to access e-mail, and

experienced network service crashes. They point out that technological advances are powerful and we have come to rely on them, so much so that we often take for granted the ways that technology has altered academic work. The authors caution us to take a step back and reflect on the changes that have occurred as a result of technological growth (Gumport & Chun, 2005).

Non-profit organizations in Georgia that have changed their approach to service delivery given technological advances are numerous and diverse. One such nonprofit trains disabled individuals and places them in jobs. Another is an emergency assistance center. A third is a hospice home that has a childcare center for special needs children. The results of incorporating technology in the services these agencies provide speak for themselves: They were able to reduce the time they took to complete intakes by 70%. The amount of time it took for them to collect 35 forms of information went from 3 hours to less than an hour, which for these agencies would be the equivalent of saving 2 full-time employees (Kurre, 2011).

With the support of technology, social service workers were able to decrease the amount of time they spent processing clients for services and increase the amount of time they spent working with clients to address transportation, housing, and childcare issues. They were able to address these issues while increasing their client numbers by 15% and saving 30-40 hours per month, creating reports and looking for files and information (Kurre, 2011).

Many adults find themselves overwhelmed by the number of prescriptions they are prescribed after meeting with their medical providers. They are unclear about their medical states and how the prescribed interventions will assist them. The confusion

leaves many in a situation where they are less likely or unable to follow the advice of their medical provider. What technology does, by way of texting to improve medication adherence for example, is close the information and behavioral gaps yielded by the limited face to face communication that people seem to be having with their medical providers (Reardon, 2012).

The implications of improved medical adherence as a result of the incorporation of medical text reminders are far reaching. Medical non-adherence is noted to account for 125,000 deaths per year according to the American Society on Ageing and the American Society of Consultant Pharmacists Foundation. In 2009, the New England Health Care Institute found that medical non-adherence costs the United States health care system about $290 billion per year (Reardon, 2012).

Of special note is that an application for the iPhone, called MedCoach, was introduced in June of 2011 and the application has been noted to have been downloaded as many times as 200 to 300 times in one day. As of February 2012, it had been downloaded 10,000 times. This suggests that there is a demand for such a technological resource, which may also suggest that this form of technology is seen by many potential users as an extension and improvement of quality medical service (Reardon, 2012).

The inclusion of technology has been framed as a means to improve the quality of teaching and learning, through the use of information and communications technology to enhance student-faculty and student-student relationships and interactions. Such outcomes are not assured however. Skeptics are concerned that the technological applications may actually have the reverse effect of undermining the quality of teaching and learning. Concerns include: the viability of conducting an educational operation

without faculty, the value of credential from virtual learning experiences, the validity and utility of competency-based credentials, and the potential for students being viewed as less competitive in the job market and less well-socialized than their counterparts who graduated from traditional colleges and universities. While technology increases information access, which relates to issues of access and efficiency, the question remains as to whether technological advancements are desirable for higher education, which is an issue of quality (Gumport & Chun, 2005).

Several concerns have been expressed about whether quality service can be insured while taking advantage of all of the opportunities posed by the use of technology. There may be extensive cost savings associated with virtual ventures, to include no need for buildings, faculty, or printed catalogs. However personnel costs will remain. Critics beg the fundamental question of: How will learning outcomes be assessed (Gumport & Chun, 2005)?

It is argued that higher education provides a critical credentialing function beyond that of knowledge acquisition of skill building, rather it also demonstrates a graduate's ability to persevere in pursuit of a long-term goal in spite of the many challenges experienced along the way. Others argue that a change in focus to learning outcomes and competency-based testing associated with virtual learning in higher education misses the measurement of significant socialization functions. The challenges for quality assurance are enormous (Gumport & Chun, 2005). With respect to social service organizations, increased dependency on technological programming is likely to result in a centralization of power, the formalization of roles, and the lessening of professionalization in the organization. This will result in a limited range of goals being maximized and ultimately

an emphasis of quantity of clients serviced over quality of those services (Hage, & Aiken, 1969).

The internet has been referred to as potentially the "ultimate isolating technology," as it is an individual activity that requires one's engagement and attention (Nie & Erbring, 2002). In a Times article on the Multi-Tasking generation, Wallis noted of a 2005 survey of Americans aged 8 to 18 that not only were children spending more of their time using electronic media than in previous years at 6.5 hours a day, but that they were packing 8.5 more hours of media exposure into that time. They were able to do this through media multitasking. For example they are able to listen to ITunes, watch a DVD and IM friends all at the same time. One fourth to 1/3 of those youth surveyed reported that they use some other form of technology most of the time when watching television, listening to music, using the computer or reading. In the same article, parents shared how they rarely have dinner together anymore. One parent shared how everyone seems to be in their own little worlds resulting in limited occasions of going out to have social lives (Wallis, 2006).

Of those surveyed in a study by Nie and Erbring, one forth of those who use internet regularly (more than 5 hours a week) feel it has reduced their time with friends and family or attending events outside the home. Two-thirds of those surveyed who have internet access said they spend less than 5 hours a week on the internet, and most did not report large changes in their daily behavior. The other 36% who use the internet five or more hours a week reported significant changes in their daily living routines. Nie and Erbring concluded there is an inverse relationship between the amount of time people use the internet and the amount of time they spend with their social environments. The more

time people spend on the internet, the less time they spend with human beings (Nie & Erbring, 2002). Regarding the implementation of technological devices in the workplace, introduction of new computer systems are proposed to result in more time alone, on the job (Weaver et al., 2003).

One small-scale experimental design study conducted by Shaw and Grant indicted that internet use was associated with decreased loneliness and depression and increased self-esteem and social support, while another small-scale study found high levels of internet use was associated with high levels of emotional loneliness (missing intimate relationships), but not social loneliness (missing a wider social network) (Shaw & Grant, 2002; Moody, 2001). These studies reflect findings associated with general internet use, not accounting for specific types and levels of such usage. In a study examining the impact of types of internet use on self-esteem levels among college students of a particular University, it was found that time spent on the internet for non-communication purposed was negatively associated with self-esteem, while a small but positive effect on self-esteem was associated with communication-type internet use (Rohall, Cotten, & Morgan, 2002).

Ideological predictions and debates exist about the benefits and consequences of technological advances (especially the internet), yet there is little empirical evidence to support either side. (Nie & Erbring, 2002). The concept of opening up new worlds of information for students is exciting provided we also take into consideration that the benefits are conditional and tied to a range of political, economic, technical and personnel related factors (Carroll, 2006). The only empirical evidence that bears directly on the affects of computerization on the work of public child welfare suggests that it may

increase documentation requirements and therefore workload as a whole. It is generally agreed that computerization has the potential to drastically alter workplace human interactions, but the empirical evidence is mixed on this subject (Weaver et al., 2003).

Engagement

The lack of a clear definition of engagement is well established and recognized as an issue that has contributed to its lack of theoretical grounding (Staudt, 2007; Dearing, Barrick, Dermen, & Walitzer, 2005; Macgowan, 1997; Altman, 2005). Based on review of organizational literature, Kahn summarizes engagement as being commonly defined as a culmination of task behaviors that encourage connections between work and others. Engagement behaviors are expressed physically, cognitively, and emotionally thereby stimulating personal development and increased employee motivation (Kahn, 1990). With respect to the field of education, Jonson-Reid, describes engagement as a sense of connectedness. This connectedness can be defined and achieved in many different ways (Johnson-Reid, 2010). In an effort to improve customer-brand loyalty, Bowden proposes a model of engagement that extends beyond customer satisfaction to engaging customers at a deeper more relationally-based level (Bowden, 2009). It is argued in consumer research that the more involved customers are with their brands, the more loyal they are over the long-term. This argument is strikingly similar to that which is found in social work research (Olivia, Oliver, and Bearden, 1995). The more involved the client, the more likely they will collaborate with their workers and maintain family goals post-case closure.

In response to the multiple perspectives on how best to define the concept of engagement, Macey and Schneider ascribe to a multidimensional definition that posits

engagement as a behavioral, state, and trait focused concept (Macey & Schneider, 2008). Staudt disentangles the behavioral from the attitudinal aspects of engagement in response to the lack of a singular definition of engagement and the gaps in theory about the relationship between engagement and other treatment processes (Staudt, 2007).

Altman proposes that engagement may be conceptualized as a process and product. The process of engagement begins when workers establish client communication and ends when there is preliminary agreement to work together. The process is generated when workers create an environment of warmth, empathy, and genuineness enabling the client to enter a helping relationship and actively work toward change. In spite of the varied definitions posed for the concept of engagement, there is strong support for its inclusion in the helping process. A child welfare worker included in Altman's study shared her understanding of successful engagement as having occurred when the client begins opening up to the worker and looks forward to seeing his or her assigned worker (Altman, 2008).

As a Social Work Foundation. Cooper acknowledges the criticality of the concept of engagement to the field of social work. He expresses how engagement has long been recognized as a core element of purposeful helping relationships in social work (Cooper, 2000). The history of the problem of engagement implementation is evidenced by a reminder made by Helen Perlman, as far back as 1979. She cautioned that social services must tend to the problems that people have as well as the people who are struggling to cope with them (Perlman, 1979). Client engagement is extensively noted as a critical element of the helping process (Altman, 2005; Dawson & Berry, 2002, Yatchmenoff, 2005).

One review of literary findings on the concept of engagement suggests that effective engagement strategies, including service components and child welfare worker qualities and behaviors, contribute to the positive case outcomes of treatment compliance, family preservation, and placement prevention (Dawson & Berry, 2002). Engagement efforts are highlighted as offering extensive client benefits to include faster family reunification, reduced court referrals, and increased likelihood of service offerings (Altman, 2008). Intensive family preservation services research found that program success can be predicted by a family's early cooperation and engagement in services (Berry, 1992; Kinney et al., 1991). Therapeutic services for children that engage parents as well as the children are more likely to retain clients than those that focus primarily on child engagement alone (Smith, Oliver, Boyce, & Innocenti, 2000). In a discussion of child welfare workers' need to take a cultural humility approach to practice, it is argued that it is critical that workers continuously engage in collaborative helping. Workers are challenged to be involved in mutually beneficial, non-paternalistic and respectful relationships with families and to practice sensitivity to the factors that define important priorities and activities needed to achieve child and family safety, stability, and well-being (Ortega & Faller, 2011).

Bowden argues that there is no current theoretical framework to be used in the measurement of the engagement process within customer behavior literature. It is further argued that most of what is said in the literature about the concept of engagement is based in practice rather than theory or empirical research (Bowden, 2009). Few empirically-based practices geared toward increasing engagement exist in the literature (Dawson & Berry, 2002). Despite increased interest in the topic, few empirically-based practices

designed to enhance it exist in the literature. Recent federal reviews indicate that no state is in compliance with standards for family involvement in services (Altman, 2008).

Child welfare worker and agency behaviors over qualities are noted as being most significant in building working relationships. Such behaviors are best communicated through clear and concrete behaviors between workers and their clients. Engaging behaviors are noted to include: setting mutually agreed upon satisfactory goals, providing services that clients deem to be relevant and helpful, focusing on client skills over insights, and spending sufficient time with clients to demonstrate skills and provide needed resources (Dawson & Berry, 2002).

Such practices, if applied in a supportive and non-punitive manner, increase client engagement in treatment and likely decrease the number of families experiencing the termination of parental rights in response to noncompliance with agency goals. Engagement is seen as a means to decrease the need for children being removed from their homes and promote reunification in instances where child removal was deemed necessary (Dawson & Berry, 2002). More research is needed that incorporates client perspectives and consideration of the worker-client relationship as they relate to service interventions to enhance our understanding of the components of effective family preservation programs (Gockel et al., 2008).

Opportunities and challenges. With respect to the field of law, Hughes argues that the lack of client engagement results in a waste of time on behalf of practitioners. Using his own practice experience as a foundation, Hughes proposes specific engagement behaviors that attorneys should incorporate into practice to facilitate client engagement and thereby improve practitioner profitability, efficiency and professional happiness

(Hughes, 2011). In education, a positive relationship has been identified between school engagement and achievement. It has also been identified as a protective factor for some risk-taking behaviors (Jonson-Reid, 2010).

Staudt proposes that worker engagement behaviors increase positive attitudes among clients toward treatment, which in turn results in an increased likelihood of clients keeping appointments, participating in sessions, doing homework, and completing other agreed upon tasks. Within this context, the attitudinal component of engagement is viewed as the heart of engagement. A challenge to successful implementation of engagement is clients having daily lives that are manageable enough to be able to invest time and energy in the engagement process (Staudt, 2007; Kemp, Marcenko, Hoagwood, & Vesneski, 2009). Other proposed barriers to engagement include personal stress, lack of effective worker training, the structure of social service agencies, the nature of mandated services, and workers simply not having the time to practice client-engaging behaviors (Staudt, 2007; Kemp, Marcenko, Hoagwood, & Vesneski, 2009).

Altman shared qualitative data yielded by a mixed-methods study of engagement in a neighborhood-based child welfare services agency. The data highlight the extent that parents and workers differ in perspectives on engagement, the best way to foster engagement in services, and the importance both parties placed on engagement as a process. Altman used Yatchmenoff's conceptualization of engagement as a dynamic, complex, and multi-level entity that encompasses interwoven factors at worker, client, agency, and community levels (Altman, 2008).

Altman's findings displayed how what the clients under study were looking for from their workers, was exactly that which the workers felt most unwilling or unable to

give. Parents essentially expressed wanting assertive, honest, clear, and urgent communications, while workers reported hesitancy in providing these things. Their reservations about providing the elements of service that the clients were seeking were also attributed to personal and professional reservations (Altman, 2008).

Fusing Concepts of Technology Use & Engagement

From a historical perspective, it is noted that the impact of technology is impossible to predict and the strongest advocates and naysayers have been inaccurate in their predictions on the impacts of technology. It is clear however that there will be some effect and it is therefore critical that the discussion be held. Some predict that technological advances will revolutionize the field of education and the learning processes therein. It has been described as an anticipated panacea for efficiency, access, and quality. On the other hand, there is a prediction that technology may end up being a heavy disappointment having failed to live up to unrealistic expectations (Gumport & Chun, 2005).

Many predict that technology will result in the downfall of the educational system. Of interesting note, Gumport and Chun point out how hundreds of years ago, there was great controversy over the use of written records and teaching, which was noted as the first technological innovation. At that time, many believed that use of written materials would undermine the learning process and diminish the quality of personal relationships between tutors and students. There was concern that putting words on paper would have a negative impact on the art of dialogue. Learners would become forgetful because they would no longer use their memories and would generally know nothing. Creativity would essentially be diminished (Gumport & Chun, 2005).

History points out how the incorporation of new technology has been met with resistance in the field of education, however over time written materials gained popularity and resulted in significant and profound changes in teaching and learning. The accumulation of written documents eventually resulted in the establishment of libraries and centralized and organized bodies of knowledge, thereby carving out a new academic landscape for teachers and learners in the 20th centuries (Gumport & Chun, 2005).

There is little evidence of sustained improvements in student performance resulting from the utilization of information technology in the field of education. This is noted to be true at the K-12 and postsecondary levels. Very little has changed and the book remains the primary classroom tool and the physical coming together of students and teachers is still the norm. In summary, the only real prediction that can be made is that technology will be impactful and the impacts will be far-reaching. The role that any specific technology will play in higher education for example cannot be predicted with any accuracy (Gumport & Chun, 2005).

Changing the Role of Social Work. Technological growth is so rapid that to be effective, educators must both adjust to the changing environment within which they teach and make efforts to predict the implications of future changes so as to prepare students for the environments they will work in post-graduation. Educators are essentially charged with preparing the students of today for a world that has yet to be created and jobs yet invented (Molebash, 2004).

To properly prepare our students, educators must move from the traditional paradigm of the teacher as all knowing and the transferor of information to a paradigm of the teacher as a facilitator of learning. Teachers must now move toward creating learning

environments that are contextual and engaging. Students must learn how to effectively communicate and access information within highly technologically-driven societies. Students must also learn to be lifelong learners given ever-changing environments, so educators must teach students how to learn on their own. Education must move from teacher-centered pedagogy to student-centered pedagogy (Molebash, 2004).

Education has previously been viewed from a content as king perspective, however there is now a call for it to be moved to a context as king perspective. Students must master the ability to locate and gather needed facts and utilize collected information appropriately versus remembering facts they may need one day (Thornburg, 1997). Traditional pedagogy required the coming together of teacher and student at the same place and same time to primarily communicate through spoken word using very basic technology. Gumport and Chun describe the transition of the traditional image of a faculty member as that of "Sage on the stage" to a modern image of the faculty member as a "guide on the side" (Gumport & Chun, 2005).

By decreasing the time required to calculate ANOVAs by hand for example, technology has allowed more of an opportunity to utilize the classroom as a natural learning laboratory, wherein students are able to learn to apply what they have learned to real world scenarios. Teachers can now engage in the monitoring of a classroom throughout an entire computerized lecture hall thereby taking on a role more like that of a coach (Gumport & Chun, 2005).

The role of the educator is postulated as being similar to that of a quarterback. The quarterback must throw the ball to where they predict the receiver will be not where he is. Educators must prepare students not for where they are now, but where they

predict society will be (McCain & Jukes, 2001). Along the same lines as educators likened to quarterbacks, Molebash cautions that good drivers do not focus on their hoods when driving, rather good drivers focus on the challenges and opportunities that lie in the road ahead. Educators need to begin focusing on the road ahead for challenges and opportunities associated with technology (Molebash, 2004). Educators must also work closely with technology designers to create a humanistic world through judicious technology use (Graham, 1997).

What it means to be educated has shifted to include that of being computer literate. Furthermore, faculty who previously gave their notes to secretaries now create their own work on computers (Gumport & Chun, 2005). In an article on Exploring Literacy on the Internet, Julie Coiro describes computer literacies as "the new literacies." She highlights how the meaning of literacy has changed to encompass a number of broadened understandings to include that of: text, reading activity, the reader, and social context (Coiro, 2003). Educators must both adjust their approach to teaching and the content to be taught.

Predicting the social implications afforded by increased technology use would be difficult; however educators are proposed to be the ones that many will turn to in preparation for the future. Of ethical note and to avoid a widening of the gap between upper and lower classes, educators will need to provide more alternative learning opportunities to include night and weekend classes highlighting technological advances (Molebash, 2004).

Of additional ethical note, educators are charged with considering issues of cultural competence as they prepare for future technological changes. For example,

Carroll cautions that most search engines like Google and Wikipedia have very Eurocentric slants, which may result in the exclusion of some sites and preference for others. This variance in preference for voices in sync with Eurocentric views runs counter to the notion to the premise of the World Wide Web. It becomes an entity more in support of selected access than total access for information (Carroll, 2006). Of final cautionary note, Wallis argues that social scientists and educators must take into consideration potential consequences of replacing physical forms of communication that took thousands of years of evolution to develop with quick impersonal e-exchanges (Wallis, 2006).

In 2003, Linden Labs created what is known as second life or a 3D virtual world, where people are able to create second selves or avatars for purposes of gaming and real-world social interaction. Gottschalk noted that second life is a hub of communication for approximately 15 million users worldwide (Gottschalk, 2010). In their study on Social Work Practice in Virtual Worlds, Anstadt, Burnette, and Bradley, propose that there may very well be a place for social workers in virtual worlds. The researchers point out that the benefits of social workers securing a place in such dimensions are numerous to include addressing issues of: distance from clients, time constraints, transportation, and access to services. The researchers also consider some of the disadvantages of online counseling in social work to include maintenance of confidentiality, obtaining informed consent, addressing liability issues, and the missed opportunity for non-verbal communication, which many practitioners believe to be an integral component of the worker-client relationship (Anstadt et al., 2011).

Virtual social work is a prime example of how technology might yield extensive benefits while also highlighting some of the potential hazards that might arise in absence of proper checks and balances. The trends, statistics, and research on technology-use are clear: Technology has changed how we do business in all facets of our lives and has certainly made an impact on those of us who are social workers and how we engage our clients (Anstadt et al., 2011).

Social Work-driven research on the use of online virtual worlds like Second Life will likely enhance the future of social work practice and intervention. Practitioners may be able to utilize online technology as a tool to broaden the scope of practice by marrying technology and social work and redefining how individuals are reached through interactions, counseling, and advocacy. An example of the many benefits provided by online counseling comes forth in consideration of individuals with disabilities and their caregivers. They would essentially be connected to social interactions and social support networks without extreme physical taxation, thereby reducing the impact of the disability. While taking advantage of such opportunities, major ethical issues must be taken into consideration. Such challenges include issues of safety, prevention, and mandatory reporting (Anstadt et al., 2011).

Smokowski and Hartung conducted a study titled Computer Simulation and Virtual Reality: Enhancing the Practice of School Social Work. They analyzed research on computer simulation games and virtual reality in school social work programs and concluded significant improvement in social, behavioral, and problem-solving skills among participants. They further concluded that the use of such modes of technology as supplements to interpersonal interaction in small groups of adolescents was an effective

tool for school social workers to use in efforts to help students accomplish goals in spite of identified barriers (Smokowski & Hartung, 2003).

McCarty and Clancy assert that care in mental health was the first telecommunication application used in social work. They point out internet-based teleconference and videoconference as established methods of effective communication and treatment for patients of psychiatrists, mental health professionals and social workers. The authors are in support of online counseling in social work as a result of the opportunities it provides in overcoming some of the previous challenges found in service delivery in such fields such as distance, time, and documentation. The researchers are clear, however that the opportunities provided by online counseling are met by very real challenges to include issues of confidentiality, informed consent, liability, and the absence of significant non-verbal communication (McCarty & Clancy, 2002).

Connecting the Impersonal & Personal. In an article by Darren Hardy, Publisher of SUCCESS magazine, he encourages others to consider the state of the world we live in. He posits that as we move busily about our day, we are essentially seeing people who aren't really there. What we are really seeing are bodies whose mind and spirit are traveling through virtual worlds. In the same discussion, he references Scott Campble of The University of Michigan, who argues that "plugging in" yields many benefits, however he also notes that those benefits might also be considered new ways that our traditional social fabric is virtually being torn apart. Hardy goes on to express how the wireless world has allowed us to stay more connected and closer to each other, but then in turn he asks about emotional distance (Hardy, 2011). In her book "Alone Together" Sherry Turkle explains how - the more we depend on technology for relationships or

connections, the more we are using that same technology to protect ourselves from those very relationships (Turkle, 2011).

Hardy's unanswered question is whether our virtual worlds are stunting our ability to truly connect in the physical world. Technology has changed the game, he says, and the key to real relationships is uninterrupted attention. He challenges us to give more than just our attendance, he calls for us to give the respect of giving undivided attention. His dad used to say – if you are bored it is because you are boring. Hardy says, allow yourself to be bored, it may push you to engage and make deeper connections. Being constantly connected may not be a good thing. Moments of silence and shutting of the virtual chatter may be just what we need (Hardy, 2011).

Some argue that new communication modes made available by technological growth and development will lead to a better informed, engaged, and influential mass public. Conversely, there are those that argue that new modes of communication will result in a society of lonely ex-couch potatoes glued to computer screens, whose human contacts are largely impersonal and whose political beliefs are easily manipulated, relying on the icons of wired or wireless society. Nie and Erbring propose that the truth about the future communication as we know it will likely fall somewhere in the middle of the extremes (Nie & Erbring, 2002).

Some studies predict that excessive use of the internet may result in Internet Addiction. Internet Addiction is also known as deficient self-regulation or a failure to control internet usage, which may be prompted by use of information and communication technologies to relieve boredom, decrease loneliness, pass time, and enhance social

identities (LaRose, Lin, & Eastin, 2003; Nalwa & Anand, 2003; Greenfield, 2000; & Morahan-Martin and Schumacher, 2000).

Internet access and use has been studied, however little research on the implications of such habits has been conducted (Nie & Erbring, 2002). For example, almost no studies exist on the social impact of cellular phone use on our youth. It is clear that theoretical developments are needed to guide researchers on the social impacts of mobile phone usage. Ultimately, there exists a lack of research on the psychological aspects of well-being and technology (Cotten, 2008). Among the limited research on the impacts of increased cellular phone use, a study was conducted on Social and Organizational Consequences of Wireless Communications. In that 1997 study, Katz found that mobile phone use resulted in uncertainty reduction, security, efficiency, information access, contactability, social interaction, and social control (Katz, 1997).

Overall, there exists much academic debate over whether computerization positively or negatively affects the social aspects of the workplace. The debate is over whether it thwarts or increases accessibility of social communication. It is argued that the debate should be contextualized, as empirical findings on the matter vary from one workplace to the next. In spite of the variance of opinion, it is generally agreed that computerization is capable of altering interaction patterns and organizational relationships. Workplace computerization thus impacts human communication quantitatively, qualitatively, and structurally (Ferguson & Cheyne, 1995; & Mantovani, 1994).

Informing Practice. Prasad and Prasad conducted a qualitative study related to technological change in a health maintenance organization. The researchers assessed the extent that the institution's ideology of professionalization impacted employees' reactions to the implementation of advanced technological systems. They found that perceptions of professionalism had an impact on acceptance of computerization. They also found that workers minimized the challenges posed by the implementation of new technology in consideration for the sense of expertise that it symbolized (Prasad & Prasad, 1994).

Humpries and Camilleri conducted a study to assess the impact of increased reliance on technology to deliver services to six million Australians through Australia's largest human service organization – Centrelink. The overall findings of this study revealed that the adoption of new technologies does influence the structure of social work practice for better and worse, thereby revealing challenges and opportunities. As a result of increased technology use within the one-stop shop organization, workers spent less time processing payments and more time in direct contact with clients. There was a reduction in human error, which resulted in increased efficiency and personalized service. Positive impacts were reflected in ongoing client surveys. On the other hand, workers were ill-trained to use certain information technology, which lead to a potentially negative effect on client services (Humpries & Camilleri, 2002).

While the researchers acknowledged the benefits of the implementation of the new technological systems, they expressed concern over human service workers becoming over reliant on technology in addition to being improperly trained to utilize it. The underlying concern of the matter was the potential for technology overshadowing the

role of the child protective service worker. Technology was viewed as having the potential for removing needed discretionary judgment of the workers. The researchers cautioned that it is critical that workers maintain an awareness that the needs of each client is unique when utilizing routinizing technology. Professionals are also cautioned to be aware of the potential danger of further marginalization of underrepresented groups with respect to access to technology. Technology must be viewed as a means to an end (Humpries & Camilleri, 2002).

In a study conducted by Tovey, Savicki, and White on Electronic Networking in Human Service Agencies, the researchers found that the introduction of electronic networking resulted in different demands being placed on workers' attention and time. A critical finding unveiled in their study was that there was a change in decision-making by workers. Decisions began being made via computerized communication over the prior face-to-face staffing process (Tovey et al., 1990).

Also of critical note is the prevalence of extensive studies on the impact of multitasking, and most research suggests that the quality of one's output and depth of thought deteriorates as one attends to more tasks. It is said that there exists a lot of research on the brain's capacity to multitask and the summation of such research posits the brain is essentially unable to do so. Wallis points to research and common sense as indicators that the quality of one's output and depth of thought necessarily deteriorate as one attempts to attend to more and more tasks simultaneously (Wallis, 2006). Such research suggests that texting or documenting on a computer while conducting a home visit with a client would necessarily result in a deterioration of the level of quality service that is delivered to the client.

One clinical case study noted that online therapy requires professional and personal flexibility to look introspectively at how our personal attitudes and predilections may contribute to our reactions to clients' words and actions. We may also have additional countertransference issues around the treatment modality itself, or the client's presentation using the chosen medium (Fenichel et al., Date unknown).

While technology affords opportunities, it also creates clear pressures to conform, which may involve contradictory prescriptions for those responsible for shepherding certain enterprises through difficult times. We must realize that technology is not a magic wand, but a set of tools. The challenge may involve preparing the imagination to harness the power of technology and unimagined potential (Gumport & Chun, 2005).

Smith and Donovan are clear on the limited research on the everyday practices of child welfare workers. They share that there exists very little research on caseworkers' assessments of their own roles in promoting client change, the effectiveness of their practice in moving families toward reunification, and the context of their work. Further these researchers stress how in the context of shorter decision making time-frames and consequences of prolonged separation or termination of parental rights, the everyday practices of frontline caseworkers warrant examination (Smith & Donovan, 2003).

To address this gap in the literature, Smith and Donovan conducted an exploratory study on workers' descriptions of their everyday work and found that daily child welfare worker practices fall short of family-centered, strengths-based practices typically promoted in education and training sectors being in line with good practice. Their study was based on interviews of foster care caseworkers and the observations of those workers in court. Seventy-seven caseworkers were surveyed and 15 were

interviewed. The caseworkers were described as downplaying their role in helping parents change, deprioritizing work with parents, focusing on parents who are easy to help, attributing failure to parental resistance, and excluding the promotion of parental change as one of their core activities. The researchers found that the organizational and institutional conditions seemed to create conditions against good practice behaviors (Smith & Donovan, 2003).

In a study by Weaver, Moses, Furman, and Lindsey on The Effects of Computerization on Public Child Welfare Practice, researchers sought to assess the effects of computerization on child welfare caseworkers. More specifically, they sought to examine the impact of a newly introduced case management system on case management practices of case managers from a Los Angeles County Department of Children and Family Services agency. Their ultimate goal was to understand how the new system effected the decisions and practices of front-line workers (Weaver et al., 2003).

Pre and post-sample comparisons were conducted, and regression analysis was used to explore how the study's variables accounted for pre-post changes in case worker practices and attitudes. Overall, the findings of this study indicated that the implementation of the new computer system did not significantly change the ways case managers carried out their daily work. Of special note was that the amount of time that caseworkers spent with their clients was unchanged by the implementation of the new computer system (Weaver et al., 2003).

What the researchers also found, however, was that there were some modest but critical changes in how workers spent their time on the job, and the quantity and quality

of relationships with others on the job as well as their attitude toward their jobs. The percent of time on paperwork increased from 30% to 34%, highlighting more time and energy being devoted to case documentation. Previously workers took notes during the home visits, however the new system required workers to take notes during the visit and complete the computerized forms upon return to the office. Time spent on staff development diminished, however that may have been the result of more training required to learn the new computer system (Weaver et al., 2003).

It was also found that workers spent more time alone than they did before. Whereas previously they spent 37% of their time alone, they later spent 44.5% of their time alone, likely attributed to the increased amount of time spent on completing computerized documentation. More time alone, was equated with less time spent with others, more specifically less time spent with coworkers. Finally, it was found that increased documentation requirements created some tension in supervisory relationships which likely enhanced negative attitudes toward the job. The researchers concluded that the core case management activities and the quality of social relationships on the job remained essentially unchanged by the implementation of computerization (Weaver et al., 2003).

With the advent of computerized documentation came a decrease in the physical space needed to store documentation generated by the newly charged child welfare worker. The limitations of paper records are clear. The physical space represents a challenge, as does accessibility and retrieval (Weaver et al., 2003).

Edwards and Reid offer an alternative and empirically supported perspective on the relationship between technology use and documentation. They conducted a study to

examine how frontline child welfare workers in New York were impacted by the implementation of a computerized case recording system via measurements of change one year post-implementation. The amount of time case workers spent recording documentation increased from 14 to 24 hours. They also noted a decreased amount of time spent in direct client services from 25 to 24 hours weekly. The workers believed that the new documentation system added to their workload rather than serving as an improvement or replacement (Edwards & Reid, 1989). Ultimately, it is acknowledged that Social Work is just beginning to research the impact of technology on practice (Humpries & Camilleri, 2002).

Child Welfare Workers

Child welfare service has been characterized as a largely bureaucratic enterprise that is charged with protecting children from abuse and neglect. Child Welfare agencies are the institutional reflection of public sentiment that seeks to ensure minimum levels of safety and well-being for children. Billions of dollars are spent at state and federal levels to ensure the protection of children (Weaver et al., 2003).

History. Child welfare workers were once referred to by some as home missionaries. As a result of the Children Act of 1948, these workers were to become professionals who provided formal organizational service (Stevenson, 1998). Historical review shows how child welfare agencies were originally developed to provide financial assistance to impoverished families. Then in the early 1960s, instances of child abuse and neglect were becoming more publicized and states began establishing mandated reporting laws. And child welfare agencies began being charged with looking into such reports and essentially intervening on behalf of children (Weaver et al., 2003).

Paradoxically as the number of reports increased, so did the call for more child protection workers, while at the same time, public sentiment became more skeptical of social service programs. Since the 1980s, expenditures of social service programs have been drastically cut in spite of the growth in demand for greater efforts to decrease incidents of child abuse. So child welfare workers are faced with the mandate of addressing a growing problem with diminished resources (Weaver et al., 2003).

Given the challenges faced by child welfare workers, it is argued that assessment and the development and implementation of theoretical grounding has become more critical than ever. It is argued that research is available; however the findings of existent research have not been fully acted upon. Evidence-based practice is said to be lacking and the time has come for our perception of the purpose of the child welfare worker to be revisited and expanded to account for the changing dynamics of the child welfare profession. On a more practical level, more tools need to be created to make sense of the work. Further, agencies need to encourage reflective and innovative practice, thereby supporting accountable professional discretion. It is proposed that today's workers are not essentially different than those of the 1950s (Stevenson, 1998).

Workload, Resources, & Training. Some caseworkers are charged with servicing double the number of cases recommended by child welfare advocacy organizations and spend between 50 and 80% of their time completing paperwork, which limits the amount of time they have available to assist children and families (U.S. General Accounting Office, 2003). In a study conducted by Yamatani, Engel, and Spjeldnes, it was found that child welfare workers were being assigned double the 16 to 17 cases per month that was being presented as reasonable by child welfare staff (Yamatani et al., 2009).

Caseworkers are challenged with having to reconcile spending more time on documentation and computer work, which has taken away from the time they have for making and working within relationships with people. Increases in complexity of case management responsibilities for case managers have resulted in increased stress levels and staff issues, which have ultimately resulted in negative effects on the quality of services provided (Postle, 2002). It is often uncertain as to whether agencies have the knowledge, technology, or skills to adequately protect the children under their supervision (Weaver et al., 2003).

Federal funds have been designated for the education and training of child welfare workers with the goal of reprofessionalizing child welfare. This funding effort resulted in the partnering of education and child welfare professionals. The funding has been recognized as a tremendous investment of resources and commitment toward the fulfillment of a child welfare workforce with professional social workers (Perry, 2006). In a study of the factors that influence the retention of specially educated Public Child Welfare Workers, Dickinson and Perry conducted a survey of 368 social workers who received Title IV-E funding during graduate school. The awarding of funding for specialized child welfare education and training carried an employment payback time post-graduation. The surveys were administered to study participants 3-6 months after the completion of their employment payback period (Dickinson & Robinson, 2001).

It was found that 78% of the IV-E graduates remained in public child welfare positions (either in their originally assigned county agency or another), 22% were no longer working in their original child welfare agency. Of the latter group, 27 were employed in a non-public child welfare agency and the remaining 54 were unsuccessfully

located. Of the original sample of 368 graduates, 235 completed the survey. Those who remained in child welfare positions were less emotionally exhausted, earned higher salaries, spent less time preparing for court and received more support from coworkers and supervisors. On the other hand, worker burnout was the number one reason for leaving expressed by those who had left their child welfare positions and those who expressed plans to leave (Dickinson & Robinson, 2001).

Impediments to the delivery of family-centered principles in daily work include being trained to consider the child as the primary client and making child safety the number one priority, logistical challenges (including high caseloads, and lack of time and other resources), and worker beliefs and expectations of parents (Alpert & Britner, 2005). Staudt acknowledges potential organizationally-related issues that contribute to workers' inability to successfully engage clients. Such barriers include high case loads, poor supervision, inadequate training, low pay and little appreciation for work, insufficient resources for staff development efforts, and few community grounded resources to support families. Clients are also held responsible for successful engagement and may choose not to for reasons beyond the control of practitioners or the agencies they represent. Finally, the lack of clarity about the concept of engagement remains an issue, so workers cannot be held fully accountable for the successful implementation of it (Staudt, 2007).

It is argued that child protection workers are held responsible when they fail to meet service expectations, however little is known of the origination and legitimacy of the service standards they attempt to meet. With respect to the education and training of child welfare workers, historically there has been a focus on skill development over

learning application and critical thinking. The Federal funding designated to specialized training and education of child welfare workers is needed and welcomed (Cooper, 2000).

Organizational variables to include workload, role ambiguity, variables related to agency change and lack of job challenge are said to contribute to employee exhaustion and resultant negative impacts on client services (Jayaratne et al., 1991; Bhana & Haffejee, 1996). There is some indication that workers can and tend to be emotionally exhausted, yet satisfied with their jobs. Their satisfaction is said to be attributable to the personal reward they find in helping others. In spite of the sense of job satisfaction they maintain, it is argued that emotional exhaustion should be avoided, because there is a chance that it may negatively impact client services. For example, some workers may defend their exhaustion through depersonalization of service. The clients they serve may experience disservice through the distant and dehumanized service received from their workers (Stalker et al., 2007).

Engagement Practices. The benefits and positive outcomes for clients who are successfully engaged during service provision are numerous and include: faster family reunification, reduced court referrals, increased likelihood of clients being offered needed services, decreased likelihood of parents losing custody of their children, and fewer repeat reports of child maltreatment (Altman, 2008). With respect to effective services with involuntary clients, it has been shown that case worker behaviors over case worker qualities are most critical to successfully influencing treatment adherence and client compliance (Rooney, 1992). Workers' beliefs and attitudes about their clients and their resultant behaviors impact worker-client relationships, which may define the entire intervention experience and impact its effectiveness. Emerging child welfare research

suggests that parents find workers who are genuine, collaborative, empathetic, and who focus on their strengths and respect their autonomy, to be engaging and helpful (Gockel et al., 2008). A National Survey of Child and Adolescent Well-being asked parents to report their level of satisfaction with their child welfare workers in 2005. The mean finding was 4.59 on an 8 point scale, which indicated a middle level of perceived relationship quality (Administration for Children and Families, 2005).

Several concerns were raised in Georgia's 2007 Federal Child and Family Services Review (CFSR). The Executive Summary of the review noted, "Of particular concern during the review was the agency's lack of consistency in assessing the needs of children and families, identifying appropriate services to meet those needs, and ensuring that services meet the intended goals for children and families...Inhibiting factors may have related to the lack of parent engagement in case planning and the lack of caseworker contact with parents in general. Of particular note was the inconsistency in engaging fathers either in services to meet their own needs or in the process of planning for their children, particularly when the fathers were not readily involved with their children" (U.S. Department of Health and Human Services, 2007).

To examine how parents experience and negotiate child protection intervention, Dumbrill conducted an exploratory study involving in-depth interviews of 18 parents who had received child protection services. The findings reflected parents' perceptions of workers' use of power was the primary factor that shaped parents' views of the intervention and how the parents reacted in turn. Parents either saw power as being used as a control mechanism over them or with them as a form of support. The parents responded in 1 of 3 ways: 1) fighting the workers through open opposition, 2) feigning

co-operation via passive aggressiveness, or 3) working in collaborative relationships. Parents who felt coerced either opposed or played the game. Those who felt power was used to support them worked collaboratively (Dumbrill, 2006).

Despite the argued significance of engaging parents, parents of children in foster care are understudied. Alpert and Britner express concern over the limited research in this area, particularly as it relates to a quantitative analysis of parent engagement. They attempted to address this research gap by testing a newly developed measurement of parent engagement. Forty-six parents of children in foster care were studied and their piloted measure reflected good reliability. The overall findings of their study showed that parent engagement was significantly negatively related to the distance between the client's home and the child welfare agency as well as length of time spent with their longest running worker (Alpert & Britner, 2009).

Alpert & Britner argue parental satisfaction is not the primary influential factor to be taken into account in consideration for exploration of parental experiences in foster care. They encourage a shift in focus toward engagement as the phenomenon of interest, where engagement is defined as involvement in the service delivery process which rests in the parent-worker relationship. This perception improves our ability to better understand parents' experiences as they relate to the delivery of family-centered practice. Such a perspective also provides an opportunity to create a measurement tool that frames worker behavior as potentially satisfying as well as engaging (Alpert & Britner, 2009).

Parents have been found to experience inconsistencies in caseworker responsiveness and being left out of the decision making process (Kapp & Propp, 2002). Parents have also been documented as feeling vulnerable to and fearful of their case

workers (Diorio, 1992). Of critical concern is that many parents have expressed feelings of hopelessness and rage toward child welfare agencies (Haight et al., 2002).

Few studies assess how closely everyday caseworker practices reflect proposed caseworker guidelines (Smith & Donovan, 2003). Engagement is deemed a critical component of case management practice guidelines, and this study will give us a glimpse of whether what is proposed to be good practice, to include engagement, is actually being implemented into daily practice as self-reported by child welfare workers.

Balancing Competing Policy Requirements. Social Workers are being challenged to avoid allowing the new administrative demands of the day to replace core social work values, to include the value of engagement. "The dilemmas and structures of financially driven 'packages of care' often seem to have had a baleful influence upon social work values and processes. However, a professional agenda for social work should demand an opportunity to delineate its future identity and reassert its defining characteristics of attending to the messy life of engagement in relationships between people as service users, practitioners, managers and educators" (Cooper, 2000, pg 118). It is argued that case managers are losing sight of the core values, skills, and knowledge that can be found in the existential reality of all relationships.

It is proposed that information and communication technology use reflects managerial over client interests. Continuation along this path will result in a decline in client participation and power and managerial interests will increasingly dominate. Other challenging matters to be addressed in response to increased technology use include: the change in practice dynamics, finding a balance in on and offline communication, confidentiality maintenance, and individual preferences in the use of information and

communication technology. Of additional concern is the social justice issue of the widening digital divide between dominant and underrepresented groups (Tregeagle & Darcy, 2008).

Conversely, information and communication technology has the potential to strengthen worker-client interaction, increase self-disclosures, increase participation, improve accountability, increase service users' voice, and influence decision making. However, research on the implications of increased technology use is limited and social workers are consequently warned to proceed with caution. While technology offers a number of practice opportunities, it should not be considered an all-inclusive response to all of the challenges experienced by child welfare professionals. Social Workers are responsible for considering potential means to improve worker-client communications in spite of the challenges they may experience in attempts to do so (Tregeagle & Darcy, 2008).

Theoretical Framework

The aim of this study was to assess the relationship between the frequency of child welfare workers' use of technology and the engaging behaviors they exhibit in their work with clients. There are numerous studies and resultant theories focused on technology use, engagement, and child welfare workers independent of one another. However, a framework that unifies the major constructs of this study does not exist. Social Constructionist Theory was selected as a framework for the current study, because it best logistically combines the major variables of the study.

Elizabeth Hutchison and Leanne Charlesworth describe the social constructionist perspective as one that focuses on how people learn through interactions with one another

in an effort to classify the world and how they are situated in it. Social reality is created by social interactions that lead to the development of a common understanding of the world. Meanings of various constructs can be changed through the process of social interactions. This perspective posits that there is no singular or true objective reality; rather there are only shared subjective realities, which are created by social interactions. Social Constructionists do, however, vary in the degree they believe in objective versus subjective realities (Hutchison, 2011).

Social Constructionist Theory offers researchers a number of strengths. For example, it is proposed to be the theory responsible for stimulating the trend of utilizing a mix of quantitative and qualitative designs in research. Secondly, it takes the social environment into consideration, given its focus on social interactions. Thirdly, Social Constructionist Theory takes diversity into account as it respects the notion of multiple realities. Finally, this perspective revives the adage of "Beginning where the client is," and consequentially highlights the importance of engagement. The worker must engage (social interaction) the client to develop an understanding of how the client ascribes meaning to various issues prior to being able to assist the client with developing solutions to the problems that prompted the worker-client relationship (Hutchison, 2011).

Social Constructionist Theory also poses a few research limitations. For example, it is often criticized for its vagueness and lack of clarity. Secondly, it is deemed difficult to operationalize for empirical research. Finally, it is criticized for paying limited attention to the role that biology plays in human behavior, as well as, social institutions at the macro-level (Hutchison, 2011).

The "frequency of technology use" construct is, at its core, an objective measure of the amount of time spent utilizing technology (although measured subjectively). Due to the objective nature of this measurement, theoretical underpinnings for this construct are less important than for the "engagement" construct. Engagement is certainly a subjective construct, which therefore calls for more theoretical support in the processes of conceptualization and operationalization.

By definition, social constructionism provides a foundation upon which to build and define what is meant by engagement for the purposes of this study. As noted earlier, social constructionism focuses on how people learn through social interactions as they seek to classify the world and how they fit in it. A generally agreed upon definition of engagement would likely incorporate a component of social interaction, which is a major tenant of social constructionism.

This theory encourages workers to recognize the existence of subjective realities and consequently variations of reality and the need for workers to engage their clients to best understand how they see the world. To understand how their clients perceive reality, social constructionist theory argues that workers are charged with engaging their clients through social interactions. One might predict, in accordance with social constructionist theory that workers cannot successfully engage clients or exhibit the behaviors classified as engaging if their foci are tied to various modes of technology. A social constructionist might also logically predict that the practical engagement methods of story-telling and discussion are thwarted by communication via key boards and computer screens. A social constructionist might argue that increased technology use has resulted in a loss of the communication skills historically used during social interactions.

In a paper on The Measure of a Competent Child Care Worker, Barry Cooper argued that a constructionist approach is personalized and promotes diversity in its focus on individuality. He proposes that this approach challenges us to assess how our own roles play a part in the initiation of change activities. Based on these arguments, one might consider how his or her frequency of technology use might impact his or her ability to communicate with or engage clients (Cooper, 2000).

The spirit of the social interaction dynamic emphasized by the social constructionist framework is related more to social interaction via face to face contact over person to person communication via Facebook for example. So, a study designed to measure the extent of engagement exhibited by technologically-driven workers would be an appropriate study and would yield information to further conceptualize the construct of engagement. In summary, the social constructionist theory at a minimum: aids in the conceptualization and operationalization of one of the major variables under study - engagement, highlights the relevance of this study given its emphasis on the importance of engagement, helps make predictions regarding the study's outcome, and offers some insight into the design and methods of the study.

CHAPTER III

METHODOLOGY

This chapter presents the design and methodology that was used to assess the relationship between the frequency of technology use and workers' tendency to engage their clients. Descriptions of the following methodological elements of the study are included in this chapter: research design; description of the site; sample and population; instrumentation; treatment of the data; and study limitations.

Research Design

Procedurally, Institutional Review Board (IRB) approval was secured prior to study initiation. Upon receipt of IRB approval, County and Regional Department of Family and Children Services (DFCS) Directors were contacted and permission was requested to administer surveys to the front-line case managers of their respective county DFCS offices. Following receipt of permission to proceed, the primary researcher scheduled and conducted visits to local DFCS offices to invite front-line managers to participate in the study. The purpose of the study was explained to potential study participants, the consent forms were reviewed and completed with study participants, and the surveys were administered and collected following completion. The consent form utilized in this study is included in Appendix A.

The design of this study is quantitative in nature. The purpose of this study was to determine whether a statistically significant relationship exists between child welfare

workers' frequency of technology use and their tendency to exhibit client-engagement behaviors. This study was also designed to describe the potential relationship between these factors. To identify and describe the potential relationships between demographic, technology use, and engagement variables, numerical data were collected through an anonymous 46-item survey, which is included in Appendix B.

The independent variables of this study include the demographic and technology use items. The technology use variable includes commonly used personal and professional modes of information and communication technology. The dependent variable under study is engagement, which was conceptualized using data gathered from a study of previous clients of a child welfare agency. The clients of that study identified worker engagement behaviors that contributed to their success in accomplishing family plan goals (Boer & Coady, 2007). Those engagement behaviors were compiled and utilized in the operationalization of the engagement variable. While the survey instrument used for this study was not tested for validity and reliability, its design was informed by literary review and relevant research findings. The data were assessed via multiple regression analysis. The ultimate study findings will be reported back to Georgia's Department of Family and Children Services Administration.

Description of the Site

This research study was conducted in the metropolitan areas of Atlanta, Georgia. Georgia encompasses 159 counties and all counties are serviced by a local county Department of Family and Children Services (DFCS) Office. A request was submitted to Regional DFCS Directors for permission to conduct the study in their county offices. Counties were selected for participation based on Regional approval and respective case

managers' agreement to participate. The surveys were administered in County DFCS offices, where survey participants were employed. Surveys were administered in participants' place of employment as a convenience measure and to minimize the interruption of client service.

Sample and Population

The population studied was comprised of Georgia Child Welfare workers, employed by the Department of Family and Children Services. These workers were limited in scope to front-line case manager positions (categorized as child placement and protection specialists), whose primary job functions are the provision of social services. The population under study was limited to front-line case managers as they are the workers who are in the most direct contact with clients under the supervision of the agency. Further, their job requirements most closely reflect the need for client engagement on a daily basis. The availability sampling method was used as part of this study. A request was submitted to DFCS County Directors for permission to visit their offices to administer a voluntary case manager survey focused on worker technology use and client interaction behaviors. Upon invitation and scheduling, the researcher visited respective county offices and administered the survey accordingly to all willing and available Social Service Case Managers.

Instrumentation

A survey questionnaire entitled Child Welfare Worker Approaches to Client Interaction in a Technology-Driven Society was employed for this study. The survey consists of 4 major sections with a total of forty-six (46) questions: Section 1: Demographic Information, Section 2: Personal Communication, Section 3: Professional

Communication and Section 4: Work with Clients. The first section, to include items 1-10, solicits basic demographic information of survey respondents. The demographic items under review include: Gender, Age Group Race/Ethnicity, Marital Status, Annual Income, Highest Grade Completed, Undergraduate Degree Type, Graduate Degree Type, Employment Unit, and Number of Years of Experience in Social Services.

The second section, which includes items 11-18, was designed to obtain measurements of respondents' personal use of information and communication technology. The modes of personal technology use under measurement include: Email, Texting, Tweeting, Facebook, Online Entertainment & Games, Online Information Searches, Online Business Transactions, and Other Unlisted Personal Online Activities. These items were selected based on the findings of a large-scale study that identified the most common uses of the Internet in America (UCLA Internet Report, 2000). Respondents expressed the amount of time spent utilizing each mode of technology on a daily basis by selecting 1 of 8 options to include: 0 min, 1-14 min, 15-29 min, 30-44 min, 45-59 min, 1-2 hours, 3-4 hours, and over 5 hours.

The third section, which includes items 19-25, was designed to obtain measurements of respondents' professional use of information and communication technology. The modes of professional technology use under measurement include: Email, Texting, Computer-Based Documentation, Online Training, Online Information Searches, Online Business Transactions, and Other Unlisted Professional Online Activities. These modes of technology were selected based on common uses of information and communication technology among Georgia Child Welfare Workers. Respondents expressed the amount of time spent utilizing each mode of professional

technology in the same manner as for personal technology use. They responded to each item by selecting 1 of 8 options to, include: 0 min, 1-14 min, 15-29 min, 30-44 min, 45-59 min, 1-2 hours, 3-4 hours, and over 5 hours. It seemed important to distinguish between measurements of personal (Section 2) and professional (Section 3) use of information and communication technology to better distinguish between respondents' frequency of technology use by choice and frequency of technology in accordance with professional mandates.

The fourth section consists of 21 client engagement attitudes and behaviors, items 26-46. The engagement items under study were designed, utilizing a study titled Good Helping Relationships in Child Welfare: Learning from Stories of Success, by Boer & Coady. Their study included interviews of child welfare workers and former Child Protective Service clients who reported establishing 'good' working relationships. Those relationships were noted as having contributed to successful case and client outcomes (Boer & Coady, 2007).

Boer and Coady's study served as an excellent foundation in the development of the current survey instrument, because their study includes clients' perspectives on the concept of engagement and the related worker behaviors that contributed to successful goal attainment. Although the current study is limited to feedback obtained from current front-line case managers, incorporation of the findings of Boer and Coady's study adds clients' perspectives, thereby enhancing its comprehensiveness. Furthermore, incorporation of clients' perspectives on the concept of engagement and more specifically the engagement behaviors that were helpful in goal attainment yields a practical conceptualization of the term "engagement" (Boer & Coady, 2007).

Boer and Coady's findings yielded engagement behaviors exhibited by case managers, which clients deemed helpful in accomplishing their goals. Those engagement behaviors were used in the current study's measurement of worker engagement (Boer & Coady, 2007). Participants of the current study were asked to rate how often they incorporated these significant engagement behaviors in their work with clients. Respondents rated each of the engagement items on a 5-point Likert scale. The scale rates responses as follows: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, and 5 = Always. The Survey Instrument employed in this study is included in Appendix B.

Treatment of Data

Statistical treatment of the data employed descriptive statistics and multiple regression analysis. Statistical analyses were conducted using the Statistical Package for Social Sciences (SPSS). The t-test was also used in this study. Descriptive Statistics offered an analysis of each of the variables under study as a means to summarize the basic study measurements. Regression analysis is a method of exploring the association between the independent and dependent variables (Pedhazur & Schmelkin, 1991). For the purposes of this study, regression analysis was used to yield an understanding of the nature of the potential relationship between Technology Use and Engagement.

Limitations of the Study

This study sought to measure, in part, an ever-changing phenomenon – technology use. Measurements of technology use today will quickly become dated as new advancements in technology come to light. Therefore data collected will have to be considered along conceptual and historic lines. This study does not include the perspectives of clients. Hence, for example, this study does not answer the question of

whether clients of workers identified as being on the low end of the engagement scale felt engaged. It may be that some clients did not want or need the specified engagement behaviors in order to feel engaged. This might be particularly true considering the involuntary nature of most of the social services provided by DFCS.

The sample used in this study was limited to social services front-line workers, who were selected through the availability sampling method. Those who are unavailable to participate in this study may have been the workers who were out effectively engaging clients. Secondly, there may have been DFCS workers who fell outside the parameters of the population under study who exhibit engagement behaviors differently than those selected for this study.

Thirdly, Georgia is comprised of 159 counties with nearly as many county DFCS offices. The researcher did not have sufficient resources to survey a sample representative enough to generalize this study's findings to all Georgia Child Welfare workers employed by the Department of Family and Children Services. This limitation is particularly important when considering the variation of policies that exist between counties, which might also impact the level of opportunity workers have to engage clients and use technology. Also, there may be DFCS social service case managers who have negative views about technology in general, who consequently refused participation in this study altogether. The absence of data from such employees likely decreases the comprehensiveness of data obtained. While technological access and abilities extend beyond Georgia's population, the child welfare workers under study were limited to those who are subject to Georgia's Department of Family and Children Services policies and mandates. Hence, the data obtained in this study may not be generalized to apply to child

welfare workers in other child and family service agencies who may have different policies and mandates that impact worker technology use and client-engagement behaviors.

As this study is non-experimental in design, it is possible that other factors may have an effect on variable measurement, to include the possibility that administrators are working to ensure workers make deliberate improvements by way of client engagement, given failed federal assessments in this area. Also, the surveys were conducted in county DFCS offices and the culture of the environments in which the surveys were conducted may have resulted in the skewing of data toward responses that align with the culture of the agency. For example, case managers might be strongly encouraged to use and enjoy technology as they fulfill job responsibilities. Some survey respondents might have amplified the extent to which they use technology to portray themselves as being in line with agency expectations.

In the absence of a survey instrument designed to measure technology use and engagement variables in tandem, one was created specifically for this study. While the development of this study's survey instrument was informed by the literature, it was not tested for validity and reliability, therefore the findings must rely primarily on face validity. Finally, as study participants completed surveys describing their own behaviors, this study is limited to the workers' own perceptions and recordings of their behaviors, which may not be an accurate reflection of the behaviors they truly exhibit.

CHAPTER IV

PRESENTATION OF FINDINGS

This research was conducted to determine the relationship between the frequency of technology use and child welfare workers' tendency to exhibit engagement behaviors with their clients. There exists an unfounded assumption that increased technology use has improved our ability to communicate with others. This assumption carries significant implications for the field of Child Protective Services given the criticality of worker-client relationships with respect to achieving successful outcomes for children and their families. Efforts to understand the relationship between the frequency of technology use and workers' tendency to exhibit client engagement behaviors will assist in the development of an improved understanding of whether continued dependency on the use of advanced technology helps or hinders child welfare workers in their service efforts.

This chapter summarizes the data collected for this study and presents the findings yielded by statistical treatment of the collected data. It is initiated by a general summary of the survey responses, followed by reiteration of the research question and hypotheses, and concluded with an analysis of the collected data. The data analysis section offers description and analysis of the major variables under study to include, demographic, technology use, and engagement variables.

Survey Response

Approval to conduct this study among Georgia's Child Protective Services Case Managers was granted by two regional administrators. Their approvals afforded an opportunity to survey up to 16 County Department of Family and Children Services offices. Two county directors secured approvals to undergo this study from their regional administrators directly, thereby expanding survey opportunities at the county level to 18. During December 2011 and January 2012, 11 of the possible 18 counties were surveyed. Resultantly, 11 counties make up the population under analysis. The remaining seven counties went unsurveyed, primarily as a result of challenges with successful coordination of scheduling for survey administration. At least half of all frontline child protective service and foster care workers employed by each county office completed this study's "Child Welfare Worker Approaches to Client Interaction in a Technology-Driven Society" survey. A total of 145 completed surveys were secured during the data collection phase of this study. All of the completed surveys were selected for inclusion in the data analysis. The Survey Instrument employed in this study is included in Appendix B.

Research Question and Hypotheses

One research question was investigated in this study: Is there a statistically significant relationship between the frequency of technology use and child welfare workers' tendency to exhibit engagement behaviors with their clients? The null hypothesis for this study is: There is no statistically significant relationship between the frequency of technology use and the tendency of child welfare workers to exhibit engagement behaviors with their clients. The current researchers' hypothesis was: The more frequently technology is used by child welfare workers, the less likely workers will

be to exhibit engagement behaviors with their clients. Sufficient information was acquired from this study to offer a conclusion about the research question and hypothesis. In the data analysis sections to follow, conclusions about the research question and hypotheses are established.

Data Analysis Results

This section presents the findings yielded by an analysis of the data collected for this study. The first subsection, Demographic Data, summarizes the survey demographic responses to offer a general profile of the study participants. The second subsection, Descriptive Statistics, defines and describes the aggregated variables under analysis. Also included in the Descriptive Statistics section is an identification of survey item responses of interest. The third and final subsection, Multiple Regression Models, includes a presentation of the regression models used to address the research question under study.

Demographic Data. Descriptive statistics were used to analyze the following demographic variables: gender, age group, ethnicity, marital status, annual income, highest grade completed, whether respondents hold a Bachelor of Social Work degree, whether respondents hold a Master of Social Work degree, whether respondents were child protective or foster care case managers, and the number of years of experience held in Social Services. One hundred and forty-five Georgia Department of Family and Children Services case managers were selected for this study utilizing the convenience sampling method.

As indicated in Table 1, the majority of survey respondents were married Caucasian females. The table also reflects the majority of respondents completed

undergraduate studies and completed those studies majoring in non-Social Work areas. The majority of respondents who completed graduate studies completed them in non-Social Work areas. For the age group, annual income, employment unit and years of experience variables, respondents were fairly evenly distributed.

Table 1: Demographic Profile of Study Respondents

Variable	Frequency	Percent
Gender		
Male	23	16.2
Female	119	83.8
Age Group		
21-25	8	5.6
26-30	30	21.0
31-35	29	20.3
36-40	12	8.4
41-45	18	12.6
46-50	17	11.9
51 up	29	20.3
Ethnicity		
AfriAmer-NonHispanic	43	29.7
Caucasian-NonHispanic	90	62.1
Asian-Pacific Islander	1	0.7
Hispanic-Latino	7	4.8
Multi-racial	3	2.1
Other	1	0.7
Marital Status		
Married	73	50.7
Never Married	33	22.9
Cohabitating	7	4.9
Divorced	25	17.4
Separated	3	2.1
Widowed	3	2.1
Annual Income		
$29,000-under	21	15.1
$30,000-31,999	37	26.6
$32,000-33,999	34	24.5
$34,000-35,999	20	14.4
$36,000 up	27	19.4

Table 1 (Continued)

Demographic Profile of Study Respondents

Variable	Frequency	Percent
Highest Grade Completed		
High School	7	5.2
Some UnderGrad Study	5	3.7
Undergraduate Study	68	50.4
Some Graduate Study	16	11.9
Graduate Study	39	28.9
Undergraduate Degree		
BSW	38	29.2
Other	92	70.8
Graduate Degree		
MSW	22	47.8
Other	24	52.2
Employment Unit		
Protective Services	66	48.2
Foster Care	71	51.8
Years of Experience in Social Services		
Less than 1 year	6	4.2
1-2 years	20	13.9
3-5 years	37	25.7
6-10 years	42	29.2
11-15 years	19	13.2
16-20 years	10	6.9
21 years up	10	6.9

Descriptive Statistics. To analyze the extent respondents used technology for personal use, survey items 11 through 18 were totaled to yield an aggregated "Personal Technology Use" variable. Those survey items include: Email, Texting, Twittering, Facebook, Online Entertainment and Games, Online Information Searches, Online Business Transactions, and Unlisted Personal Activities. Descriptive statistics of the Personal Technology Use variable are included in Table 2, while the full frequency table can be found in Appendix C.

To analyze the extent respondents used technology for professional use, survey items 19 through 25 were totaled to yield an aggregated "Professional Technology Use" variable. Those survey items include: Email, Texting, Computer-Based Documentation, Online Training, Online Information Searches, Online Business Transactions, and Unlisted Professional Activities. Descriptive statistics of the Professional Technology Use variable are included in Table 2, while the full frequency table can be found in Appendix C.

To determine how often respondents used technology on a daily basis, whether personal or professional, the aggregated Personal Technology Use and Professional Technology Use variables were added to develop a newly created variable titled "Total Technology Use." Descriptive statistics of the Total Technology Use variable are included in Table 2, while the full frequency table can be found in Appendix C.

The client engagement behaviors under study were extrapolated from a study that identified specific engagement behaviors exhibited by child welfare workers that families under the supervision of child protective services identified as being helpful to them as they successfully accomplished family plan goals. To determine the extent that respondents exhibit the aforementioned client-engagement behaviors overall, survey items 26 through 46 were summed to yield an aggregated "Client Engagement" variable. Descriptive statistics of the Client Engagement variable are included in Table 2, while the full frequency table can be found in Appendix C.

Table 2: Descriptive Statistics (Aggregated Variables)

Variable	Mean	Median	Mode	Std. Dev	Min.	Max
PersonalTech	20.96	20.00	19.00	8.33	8.00	50.00
ProfTech	24.00	23.00	20.00	6.76	7.00	51.00
TotalTech	45.11	42.50	41.00	13.02	15.00	89.00
Engagement	87.14	87.00	91.00	6.60	70.00	102.00

The results produced by the application of descriptive statistics resulted in several survey item responses of interest. The response items of interest are included in Table 3. Full frequency distribution of these survey response items is included in Appendix C. For the Personal and Professional Technology Use questions, the lowest possible response was 1 (0 minutes) and the highest possible response was 8 (5 hours or more). For the Engagement questions, the lowest possible response was 1 (never) and the highest possible response was 5 (always).

Table 3: Descriptive Statistics (Aggregated Variable Responses of Interest)

Variable	Mean	Median	Mode	Std. Dev	Min.	Max
PersonalTech						
Email	3.31	3.00	2	1.75	1	8
Texting	3.31	3.00	2	2.08	1	8
OnlineSrch	3.34	3.00	2	1.78	1	8
ProfTech						
Email	5.29	6.00	6	1.66	1	8
CompDoc	6.62	7.00	7	1.38	1	8
OnlineSrch	3.71	3.00	2	1.85	1	8
Engagement						
SelfDisclose	2.82	3.00	3	1.00	1	5
Transparent	3.11	3.00	3	0.94	1	5

Of the 8 types of personal technology use under study, emailing, texting and online searching were identified as the most common, with modes of 2 in comparison to modes of 1 for the other 5 personal technology use variables. As indicated by Table 3, the median response for personal emailing, texting, and online searching was 3 (15-29 minutes). This finding suggests respondents are spending just about as much time utilizing technology for all three activities.

Of the 7 types of professional technology use under study, emailing, computerized documenting, and online searching were identified as the most common, with modes of 6, 7, and 2 respectively in comparison to a mode of 1 for the remaining 4 professional technology use variables. With a median response of 7 (3-4 hours), respondents reported overwhelmingly engaging in computerized documentation as the most common type of professional technology use. Furthermore, 65 respondents (46.1%) reported spending 3-4 hours and 29 respondents (20.6%) reported spending more than 5 hours per day engaging in computer-based documentation. In essence, more than 66% of respondents reported spending more than 3 hours per day engaging in computerized documentation (see Appendix C for the full Frequency Table).

While emailing is reportedly one of the most frequently used forms of personal and professional technology uses, respondents reported emailing for professional use more than twice as much as they did for personal technology use. The median response for personal emailing was 3 (15-29 minutes), compared to the median response of 6 (1-2 hours) for professional emailing. Another comparison of interest is reflected in responses to the personal and professional online information search items. The median response for the personal and professional online information search items was 3 (15-29 minutes).

This rating suggests respondents are utilizing technology for information gathering similarly in their personal and professional lives.

Of the 21client engagement behaviors under study, respondents rated themselves as exhibiting 2 survey items least. They reported themselves as *self-disclosing to help develop personal connections with clients* and *being transparent with clients in terms of displaying emotion* least often in comparison to the other 19 client engagement behaviors. For these two least exhibited engagement behaviors, the median response was 3 (sometimes) in comparison to median responses of 4 (often) and 5 (always) for all other client engagement items.

There was one Engagement survey item, *I provide clients with an honest explanation about reasons for my involvement*, to which all respondents reported higher end responses as indicated by 4 (often) or 5 (always) responses. There are several Engagement survey items to which the majority of respondents reported higher end responses, also indicated by 4 (often) and 5 (always) responses. Examples of those Engagement survey items and the percentage of respondents indicating higher end responses include: *I communicate a respectful attitude with my clients* (98.6%), *I follow through on the promises that I make to clients* (93.1%), and *I adjust to communicate with my clients in a manner that they can understand* (97.9%) (see Appendix C for the full Frequency Table).

A final observation of interest is indicated by the few honest outliers that fell on the lower end of the scale as indicated by responses of 0 (never) and 1 (rarely). Examples of these outliers and the percentage of respondents indicating lower end responses include: *I respond to client negativity with understanding* (never = 11.1%, rarely = 8.3%),

I communicate a respectful attitude with my clients (never = .7%), *I follow through on the promises that I make to clients* (never = .7%), and *I use self-disclosure to help develop personal connections with my clients* (never = 10.5, rarely ~ 37 = 25.9%) (see Appendix C for the full Frequency Table).

Multiple Regression Models. One preliminary and four additional linear regression models were created to test the research question under study. Each of these models were designed to investigate whether a statistically significant relationship exists between the frequency of technology use and child welfare workers' tendency to exhibit engagement behaviors with their clients. Each of the models were run with different sets of independent variables to explore their relationship with engagement. The specific models included in this analysis are: Demographics, Personal Technology Use, Professional Technology Use, Personal + Professional Technology Use, and Total Technology Use. The dependent variable for each of the models is the aggregated Engagement variable described in the descriptive statistics section.

The Preliminary Regression Model was designed to investigate whether any of the Demographic variables has a statistically significant relationship with the dependent variable under analysis (Engagement). The independent variables included in this model are: Gender, Age Group, Race, Marital Status, Annual Income, Highest Grade Completed, Undergraduate Degree, Graduate Degree, Employment Unit, and Years of Experience in Social Services. Some of the demographic items were recoded to allow for proper inclusion and analysis as elements of the established multiple regression models. The recoded items include: Gender, Race, Marital Status, Highest Grade Completed, Undergraduate Degree, Graduate Degree, and Employment Unit.

As a dichotomous variable, *Gender* was recoded as female, with male responses serving as the referent response. The *Race/Ethnicity* variable included 7 possible responses and was recoded into *Race Black* and *Race Other*, with responses of *White* serving as the referent response. The *Race Black* variable is comprised of all *Black* responses. The *Race Other* variable is comprised of all responses other than *Black* or *White*. For the *Marital Status* variable, *Married* responses served as the referent response. *Never Married* responses were recoded as *Marriage Never. Cohabitating* responses were recoded as *Marriage Cohab. Divorced, Widowed*, and *Separated* responses were combined and recoded as *Marriage Div/Wid.* The *Highest Grade Completed* item was recoded with anything less than a *Bachelor's Degree* serving as the referent response. The *Undergraduate* and *Graduate Degree* types were combined, with responses of *Other* serving as the referent response. The *Edu.SW* variable is comprised of responses indicating confirmation of Social Work degree attainment. Lastly, as a dichotomous variable, the *Employment Unit* variable was recoded as CPS with *Foster Care* responses serving as the referent response. These recoded variables are included in each of the regression models under study to represent the 10 demographic (independent) variables listed above.

As indicated in Table 4, the Degree Type (Edu.SW) and Employment Unit (CPS) variables have statistically significant positive regression weights indicating respondents who have Social Work degrees and respondents who were Child Protective Service Case Managers are positively associated with the tendency to demonstrate client engagement behaviors, after controlling for the effects of the other variables in the model. The

adjusted R^2 indicates 8.9% of the variance of the dependent variable is explained by this model.

Table 4: The Preliminary Multiple Regression Model (Demographic Variables)

Variable	β	Std. Error	Beta	t	Sig.
(Constant)	81.139***	3.670		22.106	0.000
Female	0.514	1.739	0.029	0.296	0.768
Age Group	0.555	0.427	0.175	1.300	0.197
Race Black	0.050	1.375	0.004	0.307	0.971
Race Other	-1.296	2.266	-0.056	-0.572	0.569
Marriage Never	1.288	1.567	0.086	0.822	0.413
Marriage Cohab.	-2.492	2.707	-0.089	-0.921	0.360
Marriage Div/Wid.	-0.147	1.592	-0.010	-0.093	0.926
Annual Income	-0.490	0.517	-0.104	-0.948	0.345
Edu. Bachelors	-0.184	2.043	-0.009	-0.090	0.929
Edu.SW	3.610**	1.334	0.282	2.706	0.008
CPS	2.726*	1.213	0.217	2.247	0.027
YrsSocSerExp	0.472	0.540	0.110	0.875	0.384

Adj $R^2 = 0.089$

Note: significance levels *p≤0.05, **p≤0.01, ***p≤0.001

The First Regression Model (Personal Technology Use) was designed to investigate whether Personal Technology Use has a statistically significant effect on the dependent variable under analysis (Engagement), while controlling for the demographic factors. The independent variables included in this model are: Personal Technology Use, Gender, Age Group, Race, Marital Status, Annual Income, Highest Grade Completed,

Undergraduate Degree, Graduate Degree, Employment Unit, and Years of Experience in Social Services.

As indicated in Table 5, the Degree Type (Edu.SW) and Employment Unit (CPS) variables have statistically significant positive regression weights indicating respondents who have Social Work degrees and respondents who were Child Protective Service Case Managers are positively associated with the tendency to demonstrate client engagement behaviors, after controlling for the effects of the other variables in the model. Personal Technology Use has no statistically significant effect on Engagement. The adjusted R^2 indicates 8.5% of the variance of the dependent variable is explained by this model.

Table 5: The First Regression Model (Aggregated Personal Technology Use)

Variable	β	Std. Error	Beta	t	Sig.
(Constant)	82.786***	4.281		19.337	0.000
PersonalTech	-0.078	0.085	-0.105	-0.914	0.363
Female	1.923	1.785	0.110	1.077	0.284
Age Group	0.127	0.460	0.040	0.275	0.784
Race Black	0.967	1.468	0.072	0.659	0.512
Race Other	-0.560	2.234	-0.026	-0.251	0.803
Marriage Never	1.339	1.563	0.093	0.857	0.394
Marriage Cohab.	-3.243	2.957	-0.112	-1.097	0.276
Marriage Div/Wid.	-0.505	1.612	-0.035	-0.314	0.755
Annual Income	-0.388	0.530	-0.084	-0.732	0.466
Edu. Bachelors	-0.751	2.305	-0.034	-0.326	0.745
Edu.SW	3.645**	1.319	0.293	2.764	0.007
CPS	2.840*	1.221	0.230	2.326	0.022
YrsSocSerExp	0.661	0.539	0.159	1.227	0.223
Adj $R^2 = 0.085$					

Note: significance levels *p≤0.05, **p≤0.01, ***p≤0.001

The Second Regression Model (Professional Technology Use) was designed to investigate whether Professional Technology Use has a statistically significant effect on the dependent variable under analysis (Engagement), while controlling for the demographic factors. The independent variables included in this model are: Professional Technology Use, Gender, Age Group, Race, Marital Status, Annual Income, Highest Grade Completed, Undergraduate Degree, Graduate Degree, Employment Unit and Years of Experience in Social Services.

As indicated in Table 6, the Degree Type (Edu.SW) and Employment Unit (CPS) variables have statistically significant positive regression weights indicating respondents who have Social Work degrees and respondents who were Child Protective Service Case Managers are positively associated with the tendency to demonstrate client engagement behaviors, after controlling for the effects of the other variables in the model. Professional Technology Use has no statistically significant effect on Engagement. The adjusted R^2 indicates 9.8% of the variance of the dependent variable is explained by this model.

Table 6: The Second Regression Model (Aggregated Professional Technology Use)

Variable	β	Std. Error	Beta	t	Sig.
(Constant)	79.295***	4.526		17.520	0.000
ProfTech	0.009	0.096	0.010	0.095	0.924
Female	1.850	1.792	0.106	1.032	0.305
Age Group	0.582	0.451	0.183	1.292	0.200
Race Black	0.363	1.436	0.026	0.253	0.801
Race Other	0.228	2.371	0.010	0.096	0.924
Marriage Never	1.845	1.627	0.124	1.134	0.260
Marriage Cohab.	-3.205	2.926	-0.109	-1.095	0.276
Marriage Div/Wid.	-0.020	1.622	-0.001	-0.0.12	0.990
Annual Income	-0.512	0.527	-0.110	-0.972	0.333
Edu. Bachelors	-0.502	2.099	-0.025	-0.239	0.811
Edu.SW	3.526**	1.349	0.278	2.615	0.010
CPS	2.813*	1.244	0.225	2.261	0.026
YrsSocSerExp	0.602	0.552	0.143	1.090	0.278
Adj $R^2 = 0.098$					

Note: significance levels *p≤0.05, **p≤0.01, ***p≤0.001

The Third Regression Model (Personal Technology Use + Professional Technology Use) was designed to investigate whether Personal Technology Use and Professional Technology Use have statistically significantly different effects on the dependent variable under analysis (Engagement), while controlling for the demographic factors. The independent variables included in this model are: Personal Technology Use, Professional Technology Use, Gender, Age Group, Race, Marital Status, Annual Income,

Highest Grade Completed, Undergraduate Degree, Graduate Degree, Employment Unit, and Years of Experience in Social Services.

As indicated in Table 7, the Degree Type (Edu.SW) and Employment Unit (CPS) variables have statistically significant positive regression weights indicating respondents who have Social Work degrees and respondents who were Child Protective Service Case Managers are positively associated with the tendency to demonstrate client engagement behaviors, after controlling for the effects of the other variables in the model. Simultaneous analysis of the Personal and Professional Technology Use variables yielded similar results. Neither Personal nor Professional Technology Use has a statistically significant effect on Engagement. The adjusted R^2 indicates 8.8% of the variance of the dependent variable is explained by this model.

Table 7: The Third Regression Model (Personal + Professional Technology Use)

Variable	β	Std. Error	Beta	t	Sig.
(Constant)	79.851***	4.787		16.680	0.000
PersonalTech	-0.094	0.091	-0.128	-1.036	0.303
ProfTech	0.059	0.102	0.062	0.574	0.567
Female	2.432	1.811	0.141	1.343	0.183
Age Group	0.319	0.475	0.102	0.670	0.504
Race Black	1.094	1.509	0.081	0.725	0.470
Race Other	0.590	2.348	0.026	0.251	0.802
Marriage Never	1.947	1.635	0.133	1.191	0.237
Marriage Cohab.	-2.882	2.970	-0.102	-0.970	0.335
Marriage Div/Wid.	-0.328	1.635	-0.022	-0.201	0.841
Annual Income	-0.413	0.541	-0.090	-0.763	0.447
Edu. Bachelors	-0.194	2.324	-0.009	-0.084	0.934
Edu.SW	3.355*	1.340	0.269	2.503	0.014
CPS	2.885*	1.254	0.234	2.300	0.024
YrsSocSerExp	0.668	0.553	0.163	1.207	0.231
Adj $R^2 = 0.088$					

Note: significance levels *p≤0.05, **p≤0.01, ***p≤0.001

The Forth Regression Model (Total Technology Use) was designed to investigate whether Total Technology Use, regardless of whether used personally or professionally, has a statistically significant effect on the dependent variable under analysis (Engagement), while controlling for the demographic factors. The independent variables included in this model are: Total Technology Use, Gender, Age Group, Race, Marital Status, Annual Income, Highest Grade Completed, Undergraduate Degree, Graduate Degree, Employment Unit, and Years of Experience in Social Services.

As indicated in Table 8, the Degree Type (Edu.SW) and Employment Unit (CPS) variables have statistically significant positive regression weights indicating respondents who have Social Work degrees and respondents who were Child Protective Service Case Managers are positively associated with the tendency to demonstrate client engagement behaviors, after controlling for the effects of the other variables in the model. Total Technology Use (the summation of Personal and Professional Technology Use) has no significant effect on Engagement. The adjusted R^2 indicates 8.9% of the variance of the dependent variable is explained by this model.

Table 8: The Fourth Regression Model (Aggregated Total Technology Use)

Variable	β	Std. Error	Beta	t	Sig.
(Constant)	80.239***	4.769		16.824	0.000
TotalTech	-0.025	0.056	-0.050	-0.435	0.664
Female	2.590	1.803	0.150	1.437	0.154
Age Group	0.402	0.468	0.128	0.861	0.392
Race Black	0.907	1.497	0.067	0.606	0.546
Race Other	0.636	2.347	0.028	0.271	0.787
Marriage Never	1.912	1.634	0.131	1.170	0.245
Marriage Cohab.	-3.328	2.934	-0.118	-1.134	0.260
Marriage Div/Wid.	-0.341	1.635	-0.023	-0.209	0.835
Annual Income	-0.479	0.536	-0.105	-0.893	0.374
Edu. Bachelors	-0.154	2.323	-0.007	-0.066	0.947
Edu.SW	3.409*	1.339	0.274	2.546	0.013
CPS	2.820*	1.252	0.229	2.253	0.027
YrsSocSerExp	0.631	0.552	0.154	1.143	0.256
Adj $R^2 = 0.089$					

Note: significance levels *p≤0.05, **p≤0.01, ***p≤0.001

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

This chapter summarizes the current study. Included in this summary is a review of the study's purpose, methods and procedures, and major findings. This chapter also offers a discussion of the findings, conclusions, and recommendations.

The purpose of this study was to determine whether a statistically significant relationship exists between the amount of time child welfare workers spend utilizing various modes of advanced technology and their tendency to exhibit engagement behaviors during client interactions. The design of this study offers a measure of how often child welfare workers are using technology both personally and professionally and in what ways. The design also serves as an effort to better understand the alignment between workers' self-reported practice behaviors and established good practice methods of engagement. In effect, this study offers preliminary insight into whether technology helps or hinders workers in their efforts to effectively engage their clients.

The research question under investigation was: Is there a statistically significant relationship between the frequency of technology use and child welfare workers' tendency to exhibit engagement behaviors with their clients? It was hypothesized that the more frequently technology is used, the less likely engagement behaviors would be exhibited. The null hypothesis under study suggested there is no statistically significant relationship between the frequency of technology use and the tendency of child welfare

workers to exhibit engagement behaviors with their clients. To answer the research question and test the aforementioned hypotheses, an anonymous 46-item survey was administered to Social Service Case Managers employed by The Georgia Department of Family and Children Services. The survey was comprised of 4 major sections to include: Demographics, Personal Technology Use, Professional Technology Use, and Engagement behaviors. The survey employed in this study was not tested for reliability and validity; however it was informed by literary review and relevant research findings.

The demographic survey items served as constants, Technology Use was the independent variable, and Engagement was the dependent variable. A total of 145 completed surveys were secured during the data collection phase of this study. All of the completed surveys were included in the data analysis phase of the study. Statistical treatment of the collected data employed descriptive statistics and multiple regression analysis. Statistical analyses were conducted using the Statistical Package for Social Sciences (SPSS).

Descriptive statistics reflected a number of characteristics of interest regarding the primary variables under study, technology use and engagement. Details regarding these characteristics are presented in the discussion section to follow. One preliminary and four linear regression models were created to test the research question under study. Each of these models was designed to investigate whether a statistically significant relationship exists between the frequency of technology use and child welfare workers' tendency to demonstrate engagement behaviors with their clients.

Each of the regression models was run with different sets of aggregated independent variables to explore their relationship with engagement. The specific models included in the analysis were: Demographics, Personal Technology Use, Professional Technology Use, Personal + Professional Technology Use, and Total Technology Use. The dependent variable for each of the models was the aggregated Engagement variable described in the descriptive statistics section.

The Research Question

Is there a statistically significant relationship between the frequency of technology use and child welfare workers' tendency to exhibit engagement behaviors with their clients?

The findings of this study failed to reject the null hypothesis: There is no statistically significant relationship between the frequency of technology use and the tendency of child welfare workers to exhibit engagement behaviors with their clients. The null hypothesis failed to be rejected at the .05 level of significance ($p \leq .05$). This researcher's hypothesis, *The more frequently technology is used, the less likely engagement behaviors will be exhibited*, was not supported. Technology use was not deemed a significant predictor of engagement regardless of how it was measured. Having a Social Work degree and being employed in the Child Protective Services Unit were significant predictors of engagement across all regression models.

Discussion

This section highlights details regarding the characteristics of the major variables under study as well as initial interpretation of the study's findings. Respondents reported emailing, texting and online searching as the most common forms of personal technology

use. They reported spending about 15-29 minutes daily on each of these activities. Emailing, computerized documenting, and online searching were identified as the most common forms of professional technology use. Computerized documentation was overwhelmingly reported as the most common type of professional technology use. Respondents reported spending an average of 3-4 hours daily preparing computerized documentation.

While emailing is reportedly one of the most frequently used forms of personal and professional technology uses, respondents reported emailing for professional purposes more than twice as much as they did for personal purposes. They reported spending about 1-2 hours daily emailing for professional purposes. Respondents reported utilizing technology for information gathering purposes as often in their personal lives as they did in their professional. More specifically they reported spending an average of about 15-29 minutes daily performing online information searches for personal as well as professional purposes.

Respondents reported *self-disclosing to help develop personal connections with clients* and *being transparent with clients in terms of displaying emotion* least often in comparison to the other engagement behaviors. There was one Engagement survey item, *I provide clients with an honest explanation about reasons for my involvement*, all respondents endorsed through responses of *often* and *always*. There were several Engagement survey items to which the majority (over 90%) of respondents endorsed through *often* and *always* responses. Examples of those Engagement survey items include: *I communicate a respectful attitude with my clients, I follow through on the*

promises that I make to clients, and *I adjust to communicate with my clients in a manner that they can understand.*

Conversely, there were some respondents who reported infrequently exhibiting a few of the Engagement behaviors, as indicated by responses of *never* and *rarely.* Examples of these survey items include: *I respond to client negativity with understanding, I communicate a respectful attitude with my clients, I follow through on the promises that I make to clients,* and *I use self-disclosure to help develop personal connections with my clients.*

Personal Technology Use had no significant effect on Engagement. Professional Technology Use had no significant effect on Engagement. Simultaneous analysis of the Personal and Professional Technology Use variables yielded similar results – neither had a significant effect on Engagement. Total Technology Use (the summation of Personal and Professional Technology Use) had no significant effect on Engagement. Alternatively, the recorded Degree Type (Edu.SW) and Employment Unit (CPS) variables had statistically significant positive regression weights indicating respondents who have Social Work degrees and respondents who were Child Protective Service Case Managers were likely to report themselves as engaging clients more frequently than their counterparts. In summary, technology use was not deemed a statistically significant predictor of engagement regardless of how it was measured. Having a Social Work degree and being employed in the Child Protective Services Unit were statistically significant predictors of engagement across all regression models.

Conclusions

This section highlights the major conclusions deduced from the study findings as well as further interpretation and generalization of the study findings to the extent that the parameters of the study allow. Readers are cautioned to consider the limitations of this study as the following conclusions are explored. Most importantly, readers should consider that the following conclusions are based solely on self-reports shared by the study participants. The accuracy of the self-reports was assumed in the development of the following conclusions.

The frequency of technology use has no relationship with the studied child welfare workers' tendency to engage their clients. While this study's findings were unexpected they are findings to be celebrated. It can be concluded that concerns related to the likelihood that frequent technology use is negatively associated with the tendency to engage clients can be put to rest for now. This study offers no assurances in response to the debate of whether child welfare workers are, in effect, helped or hindered by increased technology use in their efforts to engage clients. It is important to note that although the hypothesis, frequent technology use is negatively associated with demonstrations of engagement, is unsupported by this study, there is no evidence to support the contrary. So while technology was not shown to impact child welfare workers negatively, it was not shown to impact child welfare workers positively either. As the debate regarding technology use as a help or hindrance goes unsettled, it is suggested that technology users proceed with caution.

The child welfare workers under study who are Social Workers are more likely than those who are non-Social Workers to exhibit engagement behaviors during client

interactions. This finding is what Social Work educators and students would likely hope for. In the field of Social Work and many others, client engagement is recognized as a critical element of effective helping relationships. Based on this study's findings, having a Social Work degree better prepares child welfare workers to exhibit client-engagement behaviors.

The studied Child Protective Service Workers are more likely than the studied Foster Care Workers to exhibit engagement behaviors during client interactions. It is probable that the differences between Child Protective and Foster Care workers might best be explained by the nature of their roles within their child welfare agency. Child Protective Service workers are required to have regular contact with the caregivers of the children they are charged with protecting. Furthermore, they are required to have some such contacts in clients' homes. Foster Care workers are required to have more frequent contact with children who have been removed from their homes of origin than the parents who the children have been removed from, making the foster children their primary clients. It is likely that Foster Care workers are engaging their clients, foster children, however they are likely engaging children in ways not fully captured in this study. As this conclusion is largely speculative, the reasoning behind differences in how workers are engaging their clients deserves additional attention. If Foster Care workers are truly not engaging foster parents and children, it is important that the necessary steps be taken to increase their awareness of the importance of this skill and to offer training on how to implement it.

Emailing, texting, and online searching are the most common forms of personal technology use among the child welfare workers who participated in this

study. In synchronization with the published trends on technology use, emailing is the most common form of technology use among the child welfare workers under study. UCLA reported in 2000 that in addition to email being the most common form of internet activity, 90% of all internet users email (The UCLA Internet Report, 2000). Twelve years later, this statistic holds true for the population under study. Nearly 90% of respondents in this study reported emailing on a daily basis. Also, as workers reported spending 15-29 minutes a day on emailing, texting, and online searching it can be said that technology use has become common practice. This is especially true when considering the fact that respondents are using these modes of technology by choice given confirmation of regular personal use. Further, given the normalcy of technology use for social communication, it can be argued that increasing literacy in these modes of communication would enhance cultural competency. This would be an accurate deduction, because social media has a language all its own and competence in this new literacy would yield opportunities to reach a wider population through new ways and means.

Computerized documenting, emailing, and online searching are the most common forms of professional technology use among child welfare workers who participated in this study. Workers are likely spending extended amounts of time documenting in response to increased liability issues that have become common within Social Service sectors. Workers are spending a significant amount of their days preparing documentation, given reports of online documentation activities for an average of 3-4 hours per day. Further, they are spending an additional 1-2 hours daily emailing for professional purposes. It is important to contextualize the frequency with which

workers are preparing computerized documentation and emailing. Taken together, and not accounting for travel time, court attendance, and other professional responsibilities, workers are left with just 2-4 hours of a projected 8 hour workday to work directly with their clients or exhibit engagement behaviors. While accountability measures are certainly necessary, responding to such measures significantly takes away from the time workers have left to provide direct quality service to their clients. From this perspective, it becomes evident that while frequency of technology use may not be associated with workers' tendency to exhibit engagement behaviors during client interactions, it may very well impact the time they have left to do so.

The child welfare workers who participated in this study email for professional purposes more than twice as often as they do for personal purposes. In light of the significant amount of time workers spend preparing documentation, it is likely they are utilizing email with such frequency as a means of meeting requirements to maintain communication with various parties, while maximizing the time they have left to do so. It is also likely that email serves as yet another method of creating documentation in response to increased liability concerns.

The child welfare workers who participated in this study engage in online searching as frequently for personal purposes as they do for professional purposes. In line with year 2000 trends presented by UCLA, online searching for information gathering purposes continues to be one of the more common forms of technology use (The UCLA Internet Report, 2000). Child Welfare workers are spending 15-29 minutes a day engaging in online searches for personal and professional purposes. Because workers are spending the same amount of time engaging in online searches for personal

and professional purposes, it can be supposed that online searching is recognized as a valuable approach to information gathering. Given the recognized value of online searching, it becomes apparent that learning how to conduct online searches and to do so effectively, would likely prove to be of additional support to those who do not utilize online search engines.

The child welfare workers who participated in this study vary regarding the frequency and type of engagement behaviors they exhibit during client interactions. A likely explanation for this finding is that some engagement behaviors are easier to demonstrate than others. Also, the propriety of the demonstration of certain engagement behaviors is circumstantial. Self-disclosure, for example, has been identified as an advanced Social Work skill, which has the potential to yield extensive benefits in helping relationships. Given the advanced nature of the skills of self-disclosure, it is likely that only experienced workers with specialized training would feel comfortable exercising such a skill. The sensitive and mandated nature of the helping relationships child welfare workers may have with the families they serve likely further tempers workers' feelings regarding their confidence in and the propriety of exercising self-disclosure.

Recommendations

Recommendations for Change. This study presents educators, administrators, and policy makers a number of practical implications generated by increased technology use. This section presents a few of those implications to enhance support to child welfare workers in their goals of attaining child safety, stability, and permanency.

To be effective in preparing tomorrow's workforce, educators must recognize the environments their students are being trained to work in and the skills they must learn to

be effective in those environments. Educators must also recognize the extent students and Social Workers in general are utilizing technology for personal and professional purposes. It is critical that educators stay abreast of and adapt to the environmental changes prompted by ongoing technological growth and development. Educators must prepare students to learn independently and incorporate various technology-based teaching modalities as a means to prepare students to utilize technologically-based communication mediums effectively and maximize the benefits technology has to offer.

Incorporating technology-based mediums into the classroom experience would also likely improve teacher-student relationships and students' computer literacy, which would assist students in being competitive workers. Social Work educators should recognize this study's findings as a reflection of the value of Social Work education. Clearly having such an education is positively associated with workers' perception of their tendency to engage clients. Assuming participants' self-reports are fairly accurate, having a Social Work education can be said to enhance the quality of service provided by child welfare workers. In light of these findings, educators are encouraged to continue to defend the maintenance of resources and services designed to support the attainment of Social Work degrees. Administrators and policy makers are also cautioned to carefully consider the implications prompted by the finding of this study.

While this study suggests it is not likely that high rates of technology use is negatively associated with workers' tendency to engage their clients, the study does suggest workers are using technology so frequently that they are not left with many opportunities to have direct contact with their clients. This ultimately suggests they are left with little time to engage their clients. In this way, high frequency technology use

can be argued to hinder workers in their efforts to effectively engage their clients in the helping process, which suggests negative effects on quality service provision.

As shown by this study, administrators and policy makers would fair well to consider workers' self-reports about the realities of their day-to-day professional experience. It is likely that a lot of their true professional experiences go undocumented given the time restraints under which they serve. Another important note child welfare administrators and policy makers should consider is the variance in type, tendency, and exhibitors of client-engagement behaviors. The variance in these variables should be explored, given the benefits client-engagement is proposed to offer. Efforts should be made to increase the types, tendencies, and number of exhibitors of client-engagement behaviors. This becomes increasingly important in consideration of the limited amount of time workers appear to have to interact with their clients on a daily basis.

Increased incorporation of client-engagement behaviors in workers' daily professional practices would likely enhance the quality of service workers are able to provide in however much time they have to provide it. To further maximize the quality of service, it is clear that administrators should also defend the education and training programs designed to prepare and encourage child welfare workers to incorporate advanced engagement skills in practice as a matter of necessity. As the frequency of technology use does not appear to enhance workers' tendency to engage their clients, it is probable that financial investments might be better served in education and training efforts rather than investments in new technological resources if the goal is to maximize the quality of service to children and their families. Above all, administrators and policy makers are encouraged to utilize multiple modes of research as a foundation in the

process of policy development to decrease the likelihood of experiencing unintended negative effects.

Limitations and Implications for Future Research

Does the frequency of technology use impact the amount of time workers have to engage clients? As a consequence of spending significant amounts of time using technology, workers are left with significantly less time to have direct contact with their clients. Research exploring the frequency of technology use, the tendency of workers to engage their clients, and the amount of time workers spend directly interacting with their clients would likely offer further insight into questions related to whether the frequency of technology use serves as a help or hindrance for child welfare workers seeking to engage their clients.

Do child welfare service recipients perceive their workers as demonstrating engagement behaviors as often as child welfare workers say they do? As study participants completed surveys describing their own behaviors, the study is limited to workers' own perceptions and recordings of their behaviors. Pairing clients' perspectives with their workers' reports would yield a more accurate reflection of how child welfare workers are engaging their clients.

Do child welfare workers utilize technology and exhibit engagement behaviors at the same rate nationally? This study was limited to a relatively small sample of child welfare workers employed by Georgia's Department of Family and Children Services (DFCS). In addition to not being able to generalize the findings to all of Georgia's DFCS workers or all of Georgia's Child Welfare Workers, the findings cannot be generalized on a national level. Expanding the parameters of the population of

child welfare workers under study would increase the strength of the study's findings as well as its generalizability.

Do Social Workers utilize technology and exhibit engagement behaviors at the same rate across specializations? This study suggests Social Workers are more likely to engage their clients than non-Social Workers, however these findings can only be generalized to child welfare practice and the relatively small sample of Social Workers surveyed. Further research needs to be conducted to determine whether Social Workers report utilizing technology and engaging their clients with the same frequency in other fields of practice. To address the limitations of sampling size and specialization type, future studies designed to assess the relationship between having a Social Work degree, frequency of technology use, and the tendency to exhibit engagement behaviors, should increase the sample size and number of Social Work specializations under study.

In closing, assuming participants' self-reports are fairly accurate, this study suggests frequency of technology use has no statistically significant relationship with child welfare workers' tendency to exhibit engagement behaviors during client interactions. This finding suggests skeptics may not need to be so skeptical and regular technology users may not need to be overly concerned about whether technology use negatively impacts their tendency to demonstrate engagement behaviors during client interactions. This study's findings also suggest, however, that the extensive amounts of time workers spend using technology takes away from the amount of time they have left to interact with and consequently engage their clients. As these findings are limited in scope, it is suggested that technology users proceed with caution and good judgment and non-users consider taking advantage of the opportunities that technology appears to offer

APPENDICES

Appendix A: Consent Form

Re: Child Welfare Worker Approaches to Client Interaction in a Technology-Driven Society

Dear Prospective Participant:

Thank you for considering participation in this study. I would like to introduce myself, inform you of what this study is about, and share how you will be involved. My name is Takeisha Wilson and I am a Doctoral student, at Clark Atlanta University, Whitney M. Young Jr., School of Social Work. My professional experience with The Department of Family and Children Services and interest in child welfare have contributed to my current interest in the daily practices of child welfare workers.

The enclosed survey, entitled "Child Welfare Worker Approaches to Client Interaction in a Technology-Driven Society," is being conducted as part of my dissertation research project. This study seeks to measure two aspects of child welfare practice: 1) frequency of technology use, and 2) approaches to client interactions. The study will explore trends in technology use among child welfare workers and how child welfare workers interact with clients. This study will assist child welfare policy makers, administrators, and educators and inform and support practicing child welfare workers. This data will improve the quality of services to clients. Children and their families will be major benefactors of this study, because I believe that quality of services is associated with the implementation of informed, practical, and realistic policies and procedures. To that end, I am seeking to explore the realities of the everyday technological activities and approaches to service provision of child welfare workers in Georgia. As a participant in this study, you will be asked to do the following:

- Complete a voluntary consent form
- Complete the *Child Welfare Worker Approaches to Client Interaction in a technology-driven society* survey that will take approximately 15 minutes to complete

There are no known risks or discomforts associated with your participation in this study. You will not be asked for information that will identify you. Only investigators will have access to individual survey responses, which will be coded to protect your identity. Your participation in this study is completely voluntary and refusal or withdrawal from the study will result in no penalty or loss of benefits. Feel free to contact me if you have questions or need further information. I can be reached at: Kennesaw State University, Department of Social Work and Human Services 1000 Chastain Road, MD#: 4103, Kennesaw, Georgia 30144, 770-499-3669. Alternatively, you may contact Dr. Richard Lyle, faculty sponsor, at Clark Atlanta University, 404-880-8006.

Sincerely yours,

Takeisha G. Wilson, Primary Investigator

CONSENT FORM

The purposes of this research and the survey entitled "Child Welfare Worker Approaches to Client Interaction, in a Technology-Driven Society" have been explained and my participation is voluntary. I have the right to stop participation at any time without penalty. I understand that this research has no known risks, and I will not be identified. The signed copy of this consent form will be kept by the primary investigator. A copy of the consent form has been provided to me. By signing this consent form, I am confirming that:

1. I agree with the above statements.
2. I agree to the terms of my voluntary participation.
3. I agree to participate in this research study.
4. I agree to complete the confidential *Child Welfare Worker Approaches to Client Interaction, in a Technology-Driven Society* survey.

If you have any questions now, or later, related to the integrity of the research, (the rights of research subjects or research-related injuries, where applicable), you are encouraged to contact Dr. Georgianna Bolden at the Office of Sponsored Programs (404 880-6979) or Dr. Paul I. Musey, (404) 880-6829 at Clark Atlanta University.

_____

Participant – Printed Name

_____ _____

Participant – Signature Date

_____ _____

Witness Date

_____ _____

Primary Investigator Date

Appendix B: Survey Instrument

Child Welfare Worker Approaches to Client Interaction in a Technology-Driven Society

Section I: Demographic Information

Instructions: Please fill in the circle next to the response that best applies to you. Choose only one response for each item.

1. Gender: ◯ Male ◯ Female
2. Age group: ◯ 20 or under ◯ 21-25 ◯ 26-30 ◯ 31-35
   ◯ 36-40 ◯ 41-45 ◯ 46-50 ◯ 51 or over
3. Race/Ethnicity: ◯ Black/African American (Non-Hispanic) ◯ Asian/Pacific Islander
   ◯ White/Caucasian (Non-Hispanic) ◯ Hispanic/Latino
   ◯ Native American ◯ Multi-racial
   ◯ Other
4. Marital status: ◯ Married ◯ Never Married ◯ Cohabitating
   ◯ Divorced ◯ Separated ◯ Widowed
5. Annual income: ◯ $29,999 or less ◯ $30,000-$31,999
   ◯ $32,000-$33,999 ◯ $34,000-$35,999 ◯ $36,000 or more
6. Highest grade completed: ◯ Elementary ◯ Some High School ◯ High School
   ◯ Vocational School ◯ Some Undergraduate Study
   ◯ Undergraduate Study ◯ Some Graduate Study
   ◯ Graduate Study
7. Undergraduate degree: ◯ Bachelor of Social Work ◯ Other, Please Specify _____
8. Graduate degree: ◯ Master of Social Work ◯ Other, Please Specify _____
9. Employment unit: ◯ Child Protective Services ◯ Foster Care
10. Years of experience in social services: ◯ Less than 1 year ◯ 1-2 years ◯ 3-5 years
    ◯ 6-10 years ◯ 11-15 years
    ◯ 16-20 years ◯ 21 years or more

Section II: Personal Communication

Instructions: Please fill in the circle next to the response that best describes how much time you spend daily on the following activities for **personal use**. Choose only one response for each item.

11. Email
○ 0 min ○ 1-14 min ○ 15-29 min ○ 30-44 min
○ 45-59 min ○ 1-2 hrs ○ 3-4hrs ○ over 5 hrs

12. Texting
○ 0 min ○ 1-14 min ○ 15-29 min ○ 30-44 min
○ 45-59 min ○ 1-2 hrs ○ 3-4hrs ○ over 5 hrs

13. Twittering
○ 0 min ○ 1-14 min ○ 15-29 min ○ 30-44 min
○ 45-59 min ○ 1-2 hrs ○ 3-4hrs ○ over 5 hrs

14. Facebook
○ 0 min ○ 1-14 min ○ 15-29 min ○ 30-44 min
○ 45-59 min ○ 1-2 hrs ○ 3-4hrs ○ over 5 hrs

15. Online Entertainment & Games
○ 0 min ○ 1-14 min ○ 15-29 min ○ 30-44 min
○ 45-59 min ○ 1-2 hrs ○ 3-4hrs ○ over 5 hrs

16. Online Information Searches
○ 0 min ○ 1-14 min ○ 15-29 min ○ 30-44 min
○ 45-59 min ○ 1-2 hrs ○ 3-4hrs ○ over 5 hrs

17. Online Business Transactions
○ 0 min ○ 1-14 min ○ 15-29 min ○ 30-44 min
○ 45-59 min ○ 1-2 hrs ○ 3-4hrs ○ over 5 hrs

18. Online Personal Activities Not Listed Above
○ 0 min ○ 1-14 min ○ 15-29 min ○ 30-44 min
○ 45-59 min ○ 1-2 hrs ○ 3-4hrs ○ over 5 hrs

Section III: Professional Communication

Instructions: Please fill in the circle next to the response that best describes how much time you spend daily on the following activities for **professional use**. Choose only one response for each item.

19. Email
○ 0 min ○ 1-14 min ○ 15-29 min ○ 30-44 min
○ 45-59 min ○ 1-2 hrs ○ 3-4hrs ○ over 5 hrs

20. Texting
○ 0 min ○ 1-14 min ○ 15-29 min ○ 30-44 min
○ 45-59 min ○ 1-2 hrs ○ 3-4hrs ○ over 5 hrs

21. Computer-Based Documentation
○ 0 min ○ 1-14 min ○ 15-29 min ○ 30-44 min
○ 45-59 min ○ 1-2 hrs ○ 3-4hrs ○ over 5 hrs

22. Online Training
○ 0 min ○ 1-14 min ○ 15-29 min ○ 30-44 min
○ 45-59 min ○ 1-2 hrs ○ 3-4hrs ○ over 5 hrs

23. Online Information Searches
○ 0 min ○ 1-14 min ○ 15-29 min ○ 30-44 min
○ 45-59 min ○ 1-2 hrs ○ 3-4hrs ○ over 5 hrs

24. Online Business Transactions
○ 0 min ○ 1-14 min ○ 15-29 min ○ 30-44 min
○ 45-59 min ○ 1-2 hrs ○ 3-4hrs ○ over 5 hrs

25. Online Professional Activities Not Listed Above
○ 0 min ○ 1-14 min ○ 15-29 min ○ 30-44 min
○ 45-59 min ○ 1-2 hrs ○ 3-4hrs ○ over 5 hrs

Section IV: Work With Clients

Instructions: Please fill in the circle next to the response that best describes how often each of the following statements applies to you in your work with clients. Choose only one response for each item.

26. I respond to client negativity with understanding.
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always

27. I communicate a respectful attitude with my clients.
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always

28. I provide clients with an honest explanation about reasons for my involvement.
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always

29. I address my clients' fears of their children being taken away, as such fears arise.
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always

30. I avoid prejudging my clients based on case record information.
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always

31. I carefully listen to my clients' stories.
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always

32. I share recognition of my clients' strengths with them.
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always

33. I clarify information with my clients to ensure understanding.
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always

34. I discuss concerns with my clients before jumping to conclusions.
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always

35. I respond with support to new client problems.
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always

36. I follow through on the promises that I make to clients.
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always

37. I adjust to communicate with my clients in a manner that they can understand.
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always

38. I engage in non-case related discussions with my clients to help establish rapport.
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always

39. I take steps to get to know my clients as "whole-persons."
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always

40. I relate to my clients as ordinary people with understandable problems.
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always

41. I celebrate my clients' coping successes with them.
○ Never ○ Rarely ○ Sometimes ○ Often ○ Always

42. I am patient with the pace of my clients' progress.

◯ Never ◯ Rarely ◯ Sometimes ◯ Often ◯ Always

43. I convey an optimistic outlook on possibilities for change with my clients.

◯ Never ◯ Rarely ◯ Sometimes ◯ Often ◯ Always

44. I use self-disclosure to help develop personal connections with my clients.

◯ Never ◯ Rarely ◯ Sometimes ◯ Often ◯ Always

45. I am transparent with my clients in terms of displaying emotion.

◯ Never ◯ Rarely ◯ Sometimes ◯ Often ◯ Always

46. I exceed my basic job responsibilities when working with my clients.

◯ Never ◯ Rarely ◯ Sometimes ◯ Often ◯ Always

Thank you for your time!

Appendix C: Frequency Table

Demographics

Variable	Frequency	Percent
Gender		
Male	23	16.2
Female	119	83.8
Age Group		
21-25	8	5.6
26-30	30	21.0
31-35	29	20.3
36-40	12	8.4
41-45	18	12.6
46-50	17	11.9
51 up	29	20.3
Ethnicity		
AfriAmer-NonHispanic	43	29.7
Caucasian-NonHispanic	90	62.1
Asian-Pacific Islander	1	.7
Hispanic-Latino	7	4.8
Multi-racial	3	2.1
Other	1	.7
Marital Status		
Married	73	50.7
Never Married	33	22.9
Cohabitating	7	4.9
Divorced	25	17.4
Separated	3	2.1
Widowed	3	2.1
Annual Income		
$29,000-under	21	15.1
$30,000-31,999	37	26.6
$32,000-33,999	34	24.5
$34,000-35,999	20	14.4
$36,000 up	27	19.4

Demographic Profile of Study Respondents – continued

Variable	Frequency	Percent
Highest Grade Completed		
High School	7	5.2
Some UnderGrad Study	5	3.7
Undergraduate Study	68	50.4
Some Graduate Study	16	11.9
Graduate Study	39	28.9
Undergraduate Degree		
BSW	38	29.2
Other	92	70.8
Graduate Degree		
MSW	22	47.8
Other	24	52.2
Employment Unit		
Protective Services	66	48.2
Foster Care	71	51.8
Years of Experience in Social Services		
Less than 1 year	6	4.2
1-2 years	20	13.9
3-5 years	37	25.7
6-10 years	42	29.2
11-15 years	19	13.2
16-20 years	10	6.9
21 years up	10	6.9

Personal Technology Use of Study Respondents

Variable	Frequency	Percent
Email		
0 min	14	10.1
1-14 min	46	33.3
15-29 min	29	21.0
30-44 min	14	10.1
45-59 min	6	4.3
1-2 hrs	26	18.8
3-4 hrs	2	1.4
5 hrs up	1	.7
Texting		
0 min	32	22.4
1-14 min	33	23.1
15-29 min	27	18.9
30-44 min	11	7.7
45-59 min	7	4.9
1-2 hrs	18	12.6
3-4 hrs	12	8.4
5 hrs up	3	2.1
Twittering		
0 min	127	88.8
1-14 min	9	6.3
15-29 min	1	.7
30-44 min	0	0.0
45-59 min	1	.7
1-2 hrs	4	2.8
3-4 hrs	1	.7
5 hrs up	0	0.0
Facebook		
0 min	40	28.2
1-14 min	34	23.9
15-29 min	13	9.2
30-44 min	18	12.7
45-59 min	6	4.2
1-2 hrs	27	19.0
3-4 hrs	4	2.8
5 hrs up	0	0.0

Personal Technology Use of Study Respondents - continued

Variable	Frequency	Percent
Online Entertainment & Games		
0 min	85	59.9
1-14 min	22	15.5
15-29 min	10	7.0
30-44 min	9	6.3
45-59 min	6	4.2
1-2 hrs	7	4.9
3-4 hrs	3	2.1
5 hrs up	0	0.0
Online Information Searches		
0 min	18	12.9
1-14 min	40	28.6
15-29 min	29	20.7
30-44 min	16	11.4
45-59 min	11	7.9
1-2 hrs	20	14.3
3-4 hrs	5	3.6
5 hrs up	1	.7
Online Business Transactions		
0 min	52	36.6
1-14 min	43	30.3
15-29 min	28	19.7
30-44 min	8	5.6
45-59 min	2	1.4
1-2 hrs	6	4.2
3-4 hrs	3	2.1
5 hrs up	0	0.0
Online Personal Activities Not Listed Above		
0 min	72	50.3
1-14 min	28	19.6
15-29 min	20	14.0
30-44 min	10	7.0
45-59 min	2	1.4
1-2 hrs	9	6.3
3-4 hrs	2	1.4
5 hrs up	0	0.0

Professional Technology Use of Study Respondents

Variable	Frequency	Percent
Email		
0 min	1	.7
1-14 min	4	2.8
15-29 min	20	14.0
30-44 min	26	18.2
45-59 min	15	10.5
1-2 hrs	46	32.2
3-4 hrs	16	11.2
5 hrs up	15	10.5
Texting		
0 min	100	70.4
1-14 min	26	18.3
15-29 min	7	4.9
30-44 min	5	3.5
45-59 min	0	0.0
1-2 hrs	4	2.8
3-4 hrs	0	0.0
5 hrs up	0	0.0
Computer-Based Documentation		
0 min	3	2.1
1-14 min	2	1.4
15-29 min	3	2.1
30-44 min	1	.7
45-59 min	2	1.4
1-2 hrs	36	25.5
3-4 hrs	65	46.1
5 hrs up	29	20.6
Online Training		
0 min	83	60.1
1-14 min	17	12.3
15-29 min	13	9.4
30-44 min	6	4.3
45-59 min	2	1.4
1-2 hrs	11	8.0
3-4 hrs	2	1.4
5 hrs up	4	2.9

Professional Technology Use of Study Respondents (continued)

Variable	Frequency	Percent
Online Information Searches		
0 min	8	5.6
1-14 min	44	30.8
15-29 min	28	19.6
30-44 min	15	10.5
45-59 min	6	4.2
1-2 hrs	35	24.5
3-4 hrs	5	3.5
5 hrs up	2	1.4
Online Business Transactions		
0 min	99	70.7
1-14 min	15	10.7
15-29 min	7	5.0
30-44 min	2	1.4
45-59 min	4	2.9
1-2 hrs	10	7.1
3-4 hrs	1	.7
5 hrs up	2	1.4
Online Professional Activities Not Listed Above		
0 min	61	43.6
1-14 min	20	14.3
15-29 min	19	13.6
30-44 min	8	5.7
45-59 min	4	2.9
1-2 hrs	19	13.6
3-4 hrs	6	4.3
5 hrs up	3	2.1

Worker-Client Engagement Behaviors

Variable	Frequency	Percent
I respond to client negativity with understanding		
Never	16	11.1
Rarely	12	8.3
Sometimes	22	15.3
Often	72	50.0
Always	22	15.3
I communicate a respectful attitude with my clients		
Never	1	.7
Rarely	0	0.0
Sometimes	1	.7
Often	38	26.2
Always	105	72.4
I provide clients with an honest explanation about reasons for my involvement		
Never	0	0.0
Rarely	0	0.0
Sometimes	0	0.0
Often	14	9.7
Always	131	90.3
I address my clients fears of their children being taken away as such fears arise		
Never	4	2.8
Rarely	2	1.4
Sometimes	6	4.3
Often	41	29.1
Always	88	62.4
I avoid prejudging my clients based in case record information		
Never	0	0.0
Rarely	1	.7
Sometimes	31	21.4
Often	67	46.2
Always	46	31.7

Worker-Client Engagement Behaviors (continued)

Variable	Frequency	Valid Percent
I carefully listen to my clients stories		
Never	0	0.0
Rarely	0	0.0
Sometimes	8	5.5
Often	58	40.0
Always	79	54.5
I share recognition of my clients' strengths with them		
Never	0	0.0
Rarely	0	0.0
Sometimes	10	7.0
Often	61	42.7
Always	72	50.3
I clarify information with clients to ensure understanding		
Never	0	0.0
Rarely	0	0.0
Sometimes	2	1.4
Often	55	37.9
Always	88	60.7
I discuss concerns with my clients before jumping to conclusions		
Never	0	0.0
Rarely	0	0.0
Sometimes	9	6.2
Often	72	49.7
Always	64	44.1
I respond with support to new client problems		
Never	0	0.0
Rarely	0	0.0
Sometimes	6	4.1
Often	73	50.3
Always	66	45.5

Worker-Client Engagement Behaviors (continued)

Variable	Frequency	Percent	Valid Percent
I follow through on the promises that I make to clients			
Never	1	.7	
Rarely	0	0.0	
Sometimes	9	6.3	
Often	80	55.6	
Always	54	37.5	
I adjust to communicate with my clients in a manner that they can understand			
Never	0	0.0	
Rarely	1	.7	
Sometimes	2	1.4	
Often	56	38.9	
Always	85	59.0	
I engage in non-case related discussions with my clients to help establish rapport			
Never	3	2.1	
Rarely	11	7.6	
Sometimes	47	32.4	
Often	58	40.0	
Always	26	17.9	
I take steps to get to know my clients as whole persons			
Never	0	0.0	
Rarely	2	1.4	
Sometimes	18	12.4	
Often	82	56.6	
Always	43	29.7	
I relate to my clients as ordinary people with understandable problems			
Never	0	0.0	
Rarely	2	1.4	
Sometimes	13	9.0	
Often	74	51.0	
Always	56	38.6	

Worker-Client Engagement Behaviors (continued)

Variable	Frequency	Percent
I celebrate my clients coping successes with them		
Never	0	0.0
Rarely	0	0.0
Sometimes	14	9.8
Often	75	52.4
Always	54	37.8
I am patient with the pace of my clients progress		
Never	0	0.0
Rarely	1	.7
Sometimes	56	39.4
Often	66	46.5
Always	19	13.4
I convey an optimistic outlook on possibilities for change with my clients		
Never	0	0.0
Rarely	1	.7
Sometimes	15	10.6
Often	87	61.3
Always	39	27.5
I use self-disclosure to help develop personal connections with my clients		
Never	15	10.5
Rarely	37	25.9
Sometimes	55	38.5
Often	31	21.7
Always	5	3.5
I am transparent with my clients in terms of displaying emotion		
Never	6	4.2
Rarely	29	20.1
Sometimes	61	42.4
Often	39	27.1
Always	9	6.3

Worker-Client Engagement Behaviors (continued)

Variable	Frequency	Percent
I exceed my basic job responsibilities when working with my clients		
Never	0	0.0
Rarely	1	.7
Sometimes	18	12.5
Often	85	59.0
Always	40	27.8

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